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July 7, 2021

New York American Water – Dykeer Operations District
PWS ID No. NY5920065
MCL Deferral for PFOA and PFOS
Quarterly Report – Second Quarter 2021

Introduction

On behalf of New York American Water (NYAW), Hazen and Sawyer is providing this document in accordance with the requirements of the New York State Department of Health (NYSDOH) for public water suppliers who have been granted deferrals from maximum contaminant level (MCL) violations for PFOA and PFOS. NYAW was granted an MCL deferral for PFOA and PFOS in January of 2021 due to its proactive efforts toward the implementation of treatment for these compounds.

The enclosed is a report describing NYAW's progress towards maintaining the highest quality of water for their customers and meeting the deadlines set forth in the deferral approval. The project schedule is contained in **Attachment A**.

Corrective Action Plan Milestones

Dykeer GAC Treatment

NYAW submitted the application to the Westchester County Department of Health (WCDOH) and NYSDOH for Approval of Plans in the last quarter of 2020, in line with the approved deferral schedule. Comments were received in the first quarter of 2021 and draft responses were submitted in the same quarter. NYAW and Hazen and Sawyer participated in two review meetings with the WCDOH and NYSDOH and submitted revisions in April 2021. NYAW received additional comments in June 2021 and Hazen and Sawyer delivered final documents for approval at the end of June 2021.

Given the duration of the review periods required by WCDOH and NYSDOH, NYAW currently anticipates receiving Approval of Plans in July of 2021, representing a three-month schedule variance from the originally planned April 2021 date.

NYAW submitted the application for Site Plan Approval to the Town of Somers in the second quarter of 2020. NYAW received Conditional Site Plan Approval during the last quarter of 2020. The final condition to meet is obtaining WCDOH and NYSDOH Approval of Plans. Final approval and Building Permit from the Town of Somers is expected to be issued upon receipt of Health Department approval in July of 2021

Job no

NYAW has completed the competitive bid process, awarded the project for construction, and has approved fabrication of the GAC treatment system for the facility. Construction is scheduled to begin following final approvals from the Town of Somers, and the Health Departments in July 2021.

Every effort will be made by NYAW to meet the December 2021 timeframe for project completion, however, the delayed construction start due to the duration of the WCDOH and NYSDOH reviews may have an impact to the schedule.

NYAW has continued to minimize usage of the affected wells in the Dykeer system by trucking in water to supplement the supply and blend down the contaminants at the system entry point.

Public Notification

Public notification regarding the presence and regulation of emerging compounds and the deferral was included in NYAW's 2020 annual Water Quality Report/Consumer Confidence Report released in June. The report was posted on NYAW's website and publicized via newspaper ads and bill insert. The report specific to Dykeer is available at https://www.amwater.com/ccr/dykeer.pdf. In addition, NYAW has uploaded this quarterly report to its website at https://www.amwater.com/nyaw/water-quality/Emerging-Compounds/dykeer. Documentation of public notification is contained in **Attachment B**.

Analytical Sampling

Sample results for the wells for which deferrals were granted (#1, #3, #4, & #6) and entry point, taken during the second quarter of 2021, are contained in the table below. Full laboratory reports for each sample are contained in **Attachment C**.

PFOA/PFOS (ng/l or ppt)
MCL = 10 ng/l

Location	Date Sampled	PFOA	PFOS
Well #1	5/4/2021	14.5	15.5
	6/1/2021	14.9	15.6
Well #3	5/4/2021	10.9	7.79
	6/1/2021	12.5	8.64
Well #4	5/4/2021	13.3	11.6
	6/1/2021	13.9	10.8
Well #6*	5/4/2021	12.8	11.9
	6/1/2021	16.1	14.3
Entry Point	5/4/2021	10.5	9.06
	6/1/2021	12.2	10.6

*Out of Service

Conclusion

As demonstrated above, NYAW is actively working to preserve the quality of water for its customers and comply with the requirements put forth by the NYSDOH. NYAW looks forward to continuing to work towards completion of its treatment facilities. The original approved schedule has an estimated Q4 2021 completion date that is subject to receipt of regulatory approval. Due to these delays in the regulatory review, the anticipated final completion is pushed back to Q1 2022. NYAW will apply for an extension from the DOH when/if needed and admissible.
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Should you have any questions, please contact me via email at KBarrett@hazenandsawyer.com or via phone at (917) 359-6809.

Very truly yours,

Kristen Barrett, PE
Associate Vice President

Enclosures: Attachment A – Project Schedule
Attachment B – Public Notifications
Attachment C – Laboratory Reports

cc: B. Rogers, P.E. (NYSDOH)
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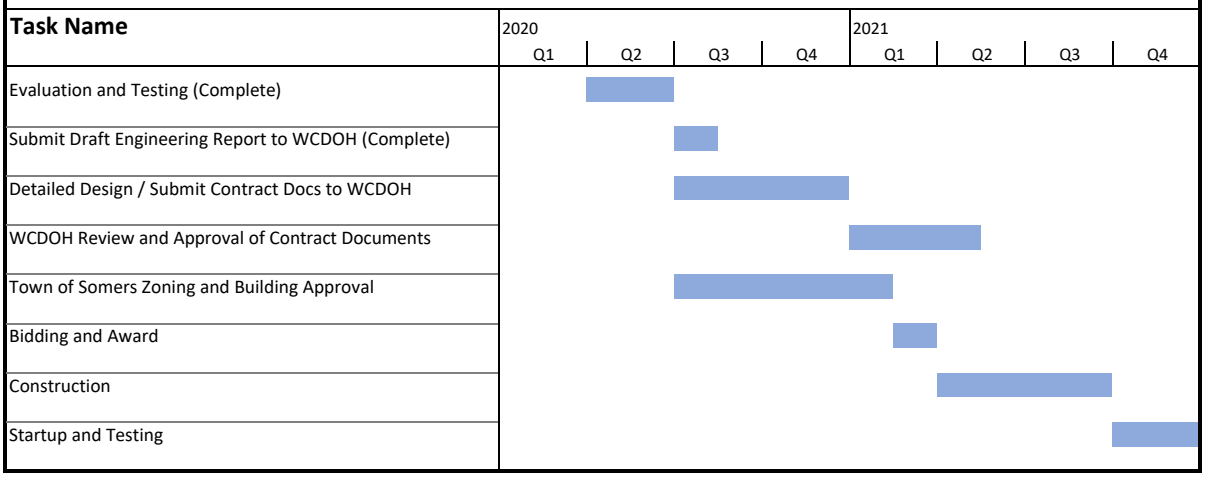
ATTACHMENT A

Project Schedule

New York American Water
Dykeer Operations District
MCL Deferral Request

GAC System at the Dykeer Treatment Plant
Project Schedule



ATTACHMENT B

Public Notifications

2020 WATER QUALITY REPORT

Dykeer Water System
(The Willows)
Public Water Supply ID# NY5920065
January 1 to December 31, 2020

Introduction:

To comply with State regulations, Dykeer Water System will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water did not meet all State drinking water health standards. We did report that our system did violate a maximum contaminant level for chlorides, and we have taken steps to rectify this problem. We removed the worst contributing well from service, we have trucked in water to supplement for the loss of that well, and we also are pursuing a new source of supply. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards. If you have any questions about this report or concerning your drinking water, please contact Environmental Consultants at 845-486-1030, American Water at 877-426-6999, or Westchester Department of Health at 914-864-7332. We want you to be informed about your drinking water.

A Message from the New York American Water President

To Our Valued Customer:

Thank you for the opportunity to serve you. I am pleased to share our **Annual Water Quality Report** with you – this is our report card on the quality of the drinking water delivered to our customers. We encourage our customers to review this report as it provides important details about the source and quality of your drinking water between January and December 2020.

New York American Water invests in our infrastructure to ensure the delivery of quality drinking water. This includes the facilities and technology needed to draw water from the source and treat it, along with miles and miles of pipeline hidden below the ground to bring water to your tap. In addition, our plant operators, water quality experts, engineers and maintenance crews work around the clock to provide you with quality water.

Delivering safe, reliable water service requires significant investment to maintain and upgrade aging facilities. **In 2020, we invested approximately $62 million in system improvements across the state.** New York American Water is also making important investments in water treatment technology to comply with New York State Department of Health's new drinking water standards for emerging compounds, specifically 1,4-Dioxane, PFOA and PFOS.

The COVID-19 public health emergency highlighted how essential water is for public health. We remain steadfast in our commitment to delivering safe and reliable water service while maintaining a safe environment for our employees and customers. New York American Water extends our sincerest gratitude to our field employees as well as all frontline workers and essential employees who are on the job and keeping life flowing. Thank you!

Sincerely,

Lynda DiMenna
President, New York American Water

About New York American Water

New York American Water, a subsidiary of American Water (NYSE: AWK), is the largest investor-owned water company in New York, providing high-quality and reliable water and/or wastewater services to approximately 350,000 people.

About American Water

With a history dating back to 1886, American Water is the largest and most geographically diverse publicly traded water and wastewater utility company. The company employs more than 7,100 dedicated professionals who provide regulated and market-based drinking water, wastewater, and other related services to more than 14 million people in 46 states and Ontario.

Where does our water come from?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to promote public health, the State and the EPA prescribe regulations which limit the number of certain contaminants in water provided by public water systems. The State Health Departments and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The NYAW Dykeer water system serves 117 homes located in the Town of Somers N.Y. The water source is groundwater drawn from four (4) drilled rock well that are under the direct influence of surface water (GWUDI). Water treatment includes disinfection with sodium hypochlorite & Ultraviolet light (UV) and sequestration using zinc orthophosphate.

The New York State Department of Health has completed a source water assessment for this system, based on available information. Possible and actual threats to this drinking water source were evaluated. The state's source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells. While nitrates (and other inorganic contaminants) were detected in our water, it should be noted that all drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants from natural sources. The presence of contaminants does not necessarily indicate that the water poses a health risk. See the section, "Are there contaminants in our drinking water?" for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

As mentioned before, our water is derived from 4 drilled wells. The source water assessment has rated these wells as having a medium to high susceptibility to microbial matter and nitrates. These ratings are primarily due to wells drawing from an unconfined aquifer, and the hydraulic conductivity is unknown. In addition, the wells draw from fractured bedrock and the overlying soils are not known to provide adequate protection from potential contamination. While the source water assessment rates our wells as being susceptible to microbial matter and nitrates, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards. A copy of the assessment, including a map of the assessment area, can be obtained by contacting us at the telephone number provided in this report.

Are there contaminants in our drinking water?

As NY State regulations require, we routinely test your drinking water for numerous contaminants, including: Total coliform, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, and synthetic organic compounds, total trihalomethanes, haloacetic acids and radiologicals. The tables presented below show which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. Please refer to the "Water Quality Results" chart for more information.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 800-426-4791.

Definitions:

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (µg/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

Nanograms per liter (ng/l): Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion – ppt)

N/A: Not applicable.

Non-Detects (ND): Laboratory analysis indicates that the constituent is not present.

Picocuries per liter (pCi/L): A measure of the radioactivity in water

Water Quality Results

Table of Detected Contaminants

Contaminant and Unit of Measurement	Date of Sample (mo/ yr)	Violation Y/N	Level Detected MAX/Ave	Range (low - high)	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants							
Barium, mg/l	10/2020	N	0.196	N/A	2	2	Erosion of natural deposits.
Chloride, mg/l	2020	Y	Max= 271	159 - 271	N/A	250	Natural occurring or indicative of road salt contamination.
Manganese, ug/L	10/2020	N	16.9	N/A	N/A	300	Naturally occurring.
Nickel, ug/l	10/2020	N	3.39	N/A	N/A	N/A	Naturally occurring.
Sodium, mg/l	10/2020	N	57.5	N/A	N/A	See Health Effects [1]	Naturally occurring; Road salt; Water softeners.
Sulfate, mg/l	10/2020	N	32.8	N/A	N/A	250	Naturally occurring.
Nitrate, mg/l	10/2020	N	2.40	N/A	10	10	Erosion of natural deposits, fertilizers, sanitary waste systems.
Color (Units)	10/2020	N	5	N/A	N/A	15	Natural color caused by organic matter.
Odor (TON)	10/2020	N	1.0	N/A	N/A	3	Natural sources
Radiological Contaminants [2]							
Entry Point							Erosion and decay of natural deposits.
Combined Radium- 226 and 228, pCi/L	04/2018	N	2.47	N/A	0	5	
Gross Beta, pCi/L	04/2018	N	6.95	N/A	0	50*	
Uranium, ug/L	04/2018	N	6.45	N/A	0	30	

Microbiological Contaminants [3]

Contaminant and Unit of Measurement	Date of sample (mo – yr)	Violation Y/N	Level Detected Max/Aver	MCLG	MCL	Likely source of contamination
Turbidity (Entry), NTU	08/2020	N	Max= 0.80	N/A	TT <= 5.0	Soil Runoff
Turbidity (Entry), NTU	2020	N	100% ≤1.0	N/A	TT=95%<=1.0	
Turbidity (Distribution), NTU	2020	N	Max= 2.14 Avg= 0.65	N/A	MCL=5.0	

[1] Sodium (mg/l): Water containing more than 20 mg/l of sodium should not be used for drinking by people on a *severely* restricted sodium diet. Water more than 270 mg/l of sodium should not be used for drinking by people on a *moderately* restricted diet.

[2] Radiological constituents were also sampled on raw water wells, as per health department requirements.

(a) The State considers 50 pCi/L to be the level of concern for beta particles.

(b) 30 µg/l of uranium is approximately 20.1 pCi/L.

[3] Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Our highest single turbidity measurement for the year occurred in August (0.80 NTU). State regulations require that turbidity must always be less than or equal to 5.0 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 1.0 NTU.

Distribution Turbidity is a measure of the cloudiness of the water found in the distribution system. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants. Our highest average monthly distribution turbidity measurement detected during the year (2.14 NTU) occurred in January 2020. This value is below the State's maximum contaminant level (5 NTU).

Disinfectant/ Disinfection By-product (D/DBP) Parameters							
Contaminant and Unit of Measurement	**Date of Sample (mo/ yr)**	**Violation Y/N**	**Average Level Detected**	**Range**	**MCLG**	**MCL**	**Likely Source of Contamination**
Haloacetic Acids (HAA5), µg/l [4]	08/2020	N	1.45	1.23 – 1.66	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms.
TTHM [Total Trihalomethanes], µg/l [4]	08/2020	N	14.8	13.7 – 15.9	N/A	80	By-product of drinking water chlorination needed to kill harmful organisms; TTHMs are formed when source water contains large amounts of organic matter.
Total Organic Carbon mg/l	2020	N	1.20	ND – 1.67	N/A	TT	Naturally present in the environment.
Disinfectants							
Chlorine, mg/l *	2020	N	1.03	0.60 – 2.12	N/A	MRDL = 4	Water additive used to control microbes

[4] The Highest Level Detected from the table above for TTHM's and HAA's represent the highest level from the two distribution locations sampled. (TTHMs – chloroform, bromodichloromethane, dibromochloromethane, and bromoform). (HAA5 --- mono-, di-, and trichloroacetic acid, and mono- and di-bromoacetic acid)
* Chlorine residual results in the table above represent averages of samples taken at the treatment plant Point-of-Entry location to the distribution system. The Level Detected from the table above for TTHM's and HAA's represent the highest level (from the two distribution locations sampled.

Lead and Copper (Tap water at homeowners' premise) *								
Contaminant and Unit of Measurement	**Date of Sample (mo/ yr)**	**AL Violation Y/N**	**90th Percentile Result * Range**	**# of samples**	**# of samples exceeding AL**	**MCLG**	**EPA's Action Level (AL)**	**Likely Source of Contamination**
Copper, mg/l	07/2020	N	0.247 (0.087 – 0.302)	10	0	1.3	1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Lead, µg/l	07/2020	N	3.55 (ND – 3.61)	10	0	0	15	

* The level presented represents the 90th percentile of the 10 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system. In this case, ten samples were collected at your water system and the 90th percentile value was the 2nd highest value. The action level for lead and copper was *not* exceeded at any of the sites tested.

We are required to present the following information on lead in drinking water:
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. It is possible that lead levels in your home may be higher than at other homes in the community because of materials used in your home's plumbing. NYAW is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at http://www.epa.gov/safewater/lead.

Synthetic Organic Contaminants*

Contaminant (units)	**Date Sampled**	**Violation (Y/N)**	**Maximum Amount Detected**	**MCL**	**MCLG**	**Range: Low-High**	**Typical Source**
Perfluorooctanoic acid – (PFOA) (ng/l)	09-10/2020	N	32.2	10	N/A	7.82 – 32.2	Released into the environment from widespread use in commercial and industrial applications.
Perfluorooctanesulfonic acid --(PFOS) (ng/l)	09-10/2020	N	32.3	10	N/A	5.69 – 32.3	

* On August 26, 2020 NYS adopted new drinking water standards for public water systems that set maximum contaminant levels (MCLs) of 10 ng/l each for PFOA and PFOS. These required sampling at Dykeer Water System starting February 25, 2021.

What does this information mean?

As you can see by the table, our system had one violation in 2020 for chlorides. We removed the worst contributing well from service, we have trucked in water to supplement for the loss of that well, and we also are pursuing a new source of supply. See attached public notification mailed to you in July 2020.

Also, at the end of 2020, Dykeer was granted a deferral for PFOA and PFOS from an MCL violation while pursuing corrective action. New York American Water is pursuing treatment and is expected to be in place end of 2021. See attached public notification mailed to you January 2021.

We are required to present the following information on lead in drinking water:
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. It is possible that lead levels in your home may be higher than at other homes in the community because of materials used in your home's plumbing. NYAW is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at http://www.epa.gov/safewater/lead.

Is our water system meeting other rules that govern operations?

During 2020, our system was in compliance with all applicable New York State drinking water operating, monitoring, and reporting requirements.

Do I Need to Take Special Precautions?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium*, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

Why Save Water and How to Avoid Wasting It?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- Saving water saves energy and water resources.
- Saving water reduces the cost of energy for pumping water and can avoid costs for developing new sources of supply; and
- Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions to ensure supply for essential uses.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- Washing machines can use up to 15 gallons for every cycle, regardless of the size of the load. Try to always run full loads.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. A slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

New York American Water is offering a free 'leak detection kit' for home use. If desired, please call our 24-hour customer call center at 877-426-6999 and request one.

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources. For questions concerning this report or your water quality, please contact Natasha Niola, Water Quality Manager, at 516-273-5670; or New York American Water's customer call center at 1-877-426-6999; or on the web at newyorkamwater.com.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Water Quality Requirements Not Met for
New York American Water – Dykeer Operations District (PWS# NY5920065)

Our system violated a water quality standard in 2020 for Chlorides. Even though this was not an emergency, as our customers, you have the right to know what happened and what we did to correct the situation.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether our drinking water meets health standards.

What happened?
During the second quarter 2020 monitoring period, the test result for Chlorides was above drinking water standards. The Maximum Contaminant Level (or "MCL") for Chlorides is 250 milligrams per liter (mg/L). The test result from a sample collected at the Entry Point to the distribution system on 04/08/20 was 270 mg/L. A confirmation sample was taken on 04/20/20 and was 272 mg/L. The average of the two samples is 271 mg/L which exceeds the 250 mg/L MCL. Therefore, a Notice of Violation (NOV) was issued for the Chloride MCL exceedance.

What should I do?
There is nothing you need to do at this time. You do not need to boil your water or take other corrective actions. However, if you have specific health concerns, consult your doctor.

What does this mean?
This is not an emergency. If it had been, you would have been notified within 24 hours. Chloride is commonly found in the environment, most often in the form of rock salt (sodium chloride) or other salts. It can also be present in the environment because of human activity. For example, chloride can become elevated in drinking water from releases to the environment of road de-icing salts, inorganic fertilizers, landfill leachates, and industrial wastewater. Treatment of drinking water with chlorine or chloride can also increase the concentration of chloride in water.

Chloride is essential for good health. While exposure to high levels of certain chloride salts is associated with adverse health effects in humans, research has not conclusively demonstrated adverse effects in humans from exposure to chloride itself. For example, high dietary intake of sodium chloride can be a contributing factor to high blood pressure, but this has been mainly attributed to the presence of sodium. The New York State standard for chloride is 250 milligrams per liter and is based on the effects of chloride on the taste, odor and appearance of the water.

What is being done?
We have been in contact with the Dykeer/The Willows Homeowners Association on the proper standards for road de-icing using road salt, who in turn has educated the snow removal contractor on industry Best Practices. It has been shown in other areas around the country that have similar geology that increased use of road salt has influenced and increased Chloride levels in the surrounding ground waters; and this may have contributed to the increased levels of Chlorides seen in the Dykeer ground water wells and entry point in 2020. In addition, we have taken the worst contributing well out of service and have been trucking in water daily to meet demand. We also are currently drilling a new test well to provide improve water quality and redundant supply.

For more information, please contact our Water Quality Manager, Natasha Niola, at 516-273-5670; or our contract operator, Environmental Consultants, at 845-486-1030; or Westchester County Department of Health at 914-864-7332.

Please share this information with others who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by Dykeer Water Company, State Water System ID#: 5920065.
Date distributed: 07/01/2020

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

QUALITY. ONE MORE WAY WE KEEP LIFE FLOWING.

Deferral Issued for PFOA and PFOS for New York American Water – Dykeer Operations District (NYAW – Dykeer)

Why are you receiving this notice/information?
You are receiving this notice because testing of our public water system found the chemicals perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) in your drinking water above
New York State's maximum contaminant level (MCL) of 10 ppt for PFOA and PFOS. The MCLs are set well below levels known to cause health effects in animal studies. Therefore, consuming water with PFOA or PFOS at the level detected does not pose a significant health risk. Your water continues to be acceptable for all uses.

NYAW - Dykeer has submitted, and the New York State Department of Health (Department) has issued, a deferral to NYAW - Dykeer. When a public water system is issued a deferral, the water system agrees to a schedule for corrective action and compliance with the new MCLs. In exchange, the Department agrees to defer enforcement actions, such as assessing fines, if the water system is meeting the established deadlines. We are required to update the Department and the Westchester County Department of Health each calendar quarter on the status of our projects. If we do not meet the agreed upon deadlines, the Department can resume enforcement.

What are the health effects of PFOA and PFOS?
The available information on the health effects associated with PFOA and PFOS, like many chemicals, comes from studies of high-level exposure in animals or humans. Less is known about the chances of health effects occurring from lower levels of exposure, such as those that might occur in drinking water. As a result, finding lower levels of chemicals in drinking water prompts water suppliers and regulators to take precautions that include notifying consumers and steps to reduce exposure.

PFOA and PFOS has caused a wide range of health effects when studied in animals that were exposed to high levels. Additional studies of high-level exposures of PFOA and PFOS in people provide evidence that some of the health effects seen in animals may also occur in humans. The most consistent findings in animals were effects on the liver and immune system and impaired fetal growth and development. The United States Environmental Protection Agency considers PFOA and PFOS as having suggestive evidence for causing cancer based on studies of animals exposed to high levels of this chemical over their entire lifetimes.

At the level of PFOA and PFOS detected in your water, exposure from drinking water and food preparation is well below PFOA and PFOS exposures associated with health effects.

What is New York State doing about PFOA and PFOS in public drinking water?
The New York State Department of Health (NYS DOH) has adopted a drinking water regulation that requires all public water systems to test for PFOA and PFOS. If found above the MCLs, the water supplier must take steps to lower the level to meet the standard. Exceedances of the MCL signal that steps should be taken by the water system to reduce contaminant levels.

What is being done to remove these contaminants?
New York American Water is actively pursuing drilling additional supply wells to increase supply capacity to meet the current demands to date, one test well has been completed, and two additional wells are planned. Beginning in April of 2020, New York American Water has been trucking in water to both supplement the supply and blend down chloride concentrations. The amount of trucked in water has averaged approximately 50% of the average daily demands and is projected to continue at similar levels until new wells are completed.

NYAW has submitted proposed plans to the NYSDOH and WCDOH for review regarding system treatment intended to mitigate PFOA and PFOS levels. Additional information will be shared as further testing and progress occurs. This process is similar for any chemical detected in public drinking water that requires mitigation. The compliance timetable will ensure that your drinking water will meet the MCL as rapidly as possible. The deferral is effective until December 25, 2021.
Where can I get more information?

For more information, please contact Natasha Niola at 516-273-5670 or Natasha.niola@amwater.com. You can also contact the Westchester Department of Health at 914-813-5000.

If you have additional questions about these contaminants and your health, talk to your health care provider who is most familiar with your health history and can provide advice and assistance about understanding how drinking water may affect your personal health.

Public Water System ID# NY5920065
Date 01/21/2021

WATER QUALITY YOU CAN TRUST

RESULTS TO PROVE IT

We have an exceptional track record when it comes to water quality and drinking water regulatory compliance. That's why we invite you to read our latest Water Quality Report, specifically for your local community.

NEW YORK
AMERICAN WATER

WE KEEP LIFE FLOWING®

PROVIDING SAFE, QUALITY WATER SERVICE

- Our drinking water meets or surpasses all primary state and federal standards, including regulations related to lead.
- Statewide, we perform thousands of tests each year on the water before it leaves our treatment plants, plus a significant number of tests in the distribution system.
- Our team of water quality experts sample and interpret data regularly, following state quality control standards. Our team utilizes certified labs across the state to process and analyze these samples. We sample above and beyond the required regulations provided by the USEPA and the local health departments.

See how we're doing in your community.

Every year, we provide a detailed analysis of the water we deliver to our communities in our Water Quality Reports. To learn more about our commitment to water quality or to view the Water Quality Report for your area, visit us online at **newyorkamwater.com**. Under Water Quality, select Water Quality Reports.

QUALITY. ONE MORE WAY
WE KEEP LIFE FLOWING.

ATTACHMENT C

Laboratory Reports

ANALYTICAL REPORT

Lab Number:	L2123105
Client:	Environmental Consultants PO Box 3148 Pouchkeepsie, NY 12603
ATTN:	Stephen Landell
Phone:	(845) 486-1030
Project Name:	DYKEER
Project Number:	DYKEER
Report Date:	05/13/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: DYKEER
Project Number: DYKEER

Lab Number: L2123105
Report Date: 05/13/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2123105-01	EP	DW	KRYSTAL DRIVE SOMERS, NY	05/04/21 12:10	05/04/21
L2123105-02	WELL 1	DW	KRYSTAL DRIVE SOMERS, NY	05/04/21 12:00	05/04/21
L2123105-03	WELL 3	DW	KRYSTAL DRIVE SOMERS, NY	05/04/21 12:10	05/04/21
L2123105-04	WELL 4	DW	KRYSTAL DRIVE SOMERS, NY	05/04/21 11:50	05/04/21
L2123105-05	WELL 6	DW	KRYSTAL DRIVE SOMERS, NY	05/04/21 11:50	05/04/21
L2123105-06	FIELD BLANK	DW	KRYSTAL DRIVE SOMERS, NY	05/04/21 12:12	05/04/21

Project Name:	DYKEER	**Lab Number:**	L2123105
Project Number:	DYKEER	**Report Date:**	05/13/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	DYKEER	**Lab Number:**	L2123105
Project Number:	DYKEER	**Report Date:**	05/13/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

1,4-Dioxane by Method 522

The WG1496693-2/-3 LCS/LCSD recoveries, associated with L2123105-01 through -05, are within the acceptance criteria for low level 522 LCS spike, which is 50 - 150%.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 05/13/21

ORGANICS

SEMIVOLATILES

Project Name: DYKEER
Project Number: DYKEER
Lab Number: L2123105
Report Date: 05/13/21

SAMPLE RESULTS

Lab ID: L2123105-01
Client ID: EP
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 05/04/21 12:10
Date Received: 05/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 120,522
Analytical Date: 05/11/21 14:00
Analyst: PS

Extraction Method: EPA 522
Extraction Date: 05/10/21 05:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by EPA 522 - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.147	0.147	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	76		70-130

Project Name: DYKEER
Lab Number: L2123105
Project Number: DYKEER
Report Date: 05/13/21

SAMPLE RESULTS

Lab ID: L2123105-01
Client ID: EP
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 05/04/21 12:10
Date Received: 05/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 05/12/21 13:26
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 05/11/21 16:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	5.64		ng/l	1.86	0.620	1
Perfluorohexanoic Acid (PFHxA)	6.68		ng/l	1.86	0.620	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.86	0.620	1
Perfluoroheptanoic Acid (PFHpA)	3.12		ng/l	1.86	0.620	1
Perfluorohexanesulfonic Acid (PFHxS)	2.12		ng/l	1.86	0.620	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.86	0.620	1
Perfluorooctanoic Acid (PFOA)	10.5		ng/l	1.86	0.620	1
Perfluorononanoic Acid (PFNA)	0.817	J	ng/l	1.86	0.620	1
Perfluorooctanesulfonic Acid (PFOS)	9.06		ng/l	1.86	0.620	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.86	0.620	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.86	0.620	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.86	0.620	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.86	0.620	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	0.668	J	ng/l	1.86	0.620	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.86	0.620	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.86	0.620	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.86	0.620	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.86	0.620	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	92		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	80		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	94		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	85		70-130

Project Name: DYKEER
Project Number: DYKEER
Lab Number: L2123105
Report Date: 05/13/21

SAMPLE RESULTS

Lab ID: L2123105-02
Client ID: WELL 1
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 05/04/21 12:00
Date Received: 05/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 120,522
Analytical Date: 05/11/21 14:21
Analyst: PS

Extraction Method: EPA 522
Extraction Date: 05/10/21 05:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by EPA 522 - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.142	0.142	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	72		70-130

Project Name: DYKEER
Lab Number: L2123105
Project Number: DYKEER
Report Date: 05/13/21

SAMPLE RESULTS

Lab ID: L2123105-02
Client ID: WELL 1
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 05/04/21 12:00
Date Received: 05/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 05/12/21 13:34
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 05/11/21 16:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	8.75		ng/l	1.78	0.594	1
Perfluorohexanoic Acid (PFHxA)	9.36		ng/l	1.78	0.594	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.78	0.594	1
Perfluoroheptanoic Acid (PFHpA)	4.06		ng/l	1.78	0.594	1
Perfluorohexanesulfonic Acid (PFHxS)	3.06		ng/l	1.78	0.594	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.78	0.594	1
Perfluorooctanoic Acid (PFOA)	14.5		ng/l	1.78	0.594	1
Perfluorononanoic Acid (PFNA)	1.10	J	ng/l	1.78	0.594	1
Perfluorooctanesulfonic Acid (PFOS)	15.5		ng/l	1.78	0.594	1
Perfluorodecanoic Acid (PFDA)	0.676	J	ng/l	1.78	0.594	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.78	0.594	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	0.818	J	ng/l	1.78	0.594	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.78	0.594	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	1.49	J	ng/l	1.78	0.594	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.78	0.594	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.78	0.594	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.78	0.594	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.78	0.594	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	96		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	88		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	93		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	86		70-130

Project Name: DYKEER
Lab Number: L2123105
Project Number: DYKEER
Report Date: 05/13/21

SAMPLE RESULTS

Lab ID: L2123105-03
Client ID: WELL 3
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 05/04/21 12:10
Date Received: 05/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 120,522
Analytical Date: 05/11/21 14:43
Analyst: PS

Extraction Method: EPA 522
Extraction Date: 05/10/21 05:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by EPA 522 - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.139	0.139	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	76		70-130

Project Name: DYKEER
Lab Number: L2123105
Project Number: DYKEER
Report Date: 05/13/21

SAMPLE RESULTS

Lab ID: L2123105-03
Client ID: WELL 3
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 05/04/21 12:10
Date Received: 05/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 05/12/21 13:43
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 05/11/21 16:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	4.82		ng/l	1.79	0.597	1
Perfluorohexanoic Acid (PFHxA)	7.47		ng/l	1.79	0.597	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.79	0.597	1
Perfluoroheptanoic Acid (PFHpA)	3.36		ng/l	1.79	0.597	1
Perfluorohexanesulfonic Acid (PFHxS)	2.18		ng/l	1.79	0.597	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.79	0.597	1
Perfluorooctanoic Acid (PFOA)	10.9		ng/l	1.79	0.597	1
Perfluorononanoic Acid (PFNA)	0.679	J	ng/l	1.79	0.597	1
Perfluorooctanesulfonic Acid (PFOS)	7.79		ng/l	1.79	0.597	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.79	0.597	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.79	0.597	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.79	0.597	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.79	0.597	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.79	0.597	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.79	0.597	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.79	0.597	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.79	0.597	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.79	0.597	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	97		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	90		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	92		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	96		70-130

Project Name: DYKEER
Lab Number: L2123105
Project Number: DYKEER
Report Date: 05/13/21

SAMPLE RESULTS

Lab ID: L2123105-04
Client ID: WELL 4
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 05/04/21 11:50
Date Received: 05/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 120,522
Analytical Date: 05/11/21 15:04
Analyst: PS

Extraction Method: EPA 522
Extraction Date: 05/10/21 05:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by EPA 522 - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.144	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	70		70-130

Project Name: DYKEER
Lab Number: L2123105
Project Number: DYKEER
Report Date: 05/13/21

SAMPLE RESULTS

Lab ID: L2123105-04
Client ID: WELL 4
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 05/04/21 11:50
Date Received: 05/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 05/12/21 13:52
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 05/11/21 16:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	7.82		ng/l	1.79	0.597	1
Perfluorohexanoic Acid (PFHxA)	8.22		ng/l	1.79	0.597	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.79	0.597	1
Perfluoroheptanoic Acid (PFHpA)	4.07		ng/l	1.79	0.597	1
Perfluorohexanesulfonic Acid (PFHxS)	2.93		ng/l	1.79	0.597	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.79	0.597	1
Perfluorooctanoic Acid (PFOA)	13.3		ng/l	1.79	0.597	1
Perfluorononanoic Acid (PFNA)	0.857	J	ng/l	1.79	0.597	1
Perfluorooctanesulfonic Acid (PFOS)	11.6		ng/l	1.79	0.597	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.79	0.597	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.79	0.597	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.79	0.597	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.79	0.597	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.79	0.597	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.79	0.597	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.79	0.597	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.79	0.597	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.79	0.597	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	96		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	90		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	88		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	92		70-130

Project Name: DYKEER
Project Number: DYKEER
Lab Number: L2123105
Report Date: 05/13/21

SAMPLE RESULTS

Lab ID: L2123105-05
Client ID: WELL 6
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 05/04/21 11:50
Date Received: 05/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 120,522
Analytical Date: 05/11/21 15:26
Analyst: PS

Extraction Method: EPA 522
Extraction Date: 05/10/21 05:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by EPA 522 - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.147	0.147	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	72		70-130

Project Name: DYKEER
Lab Number: L2123105
Project Number: DYKEER
Report Date: 05/13/21

SAMPLE RESULTS

Lab ID: L2123105-05
Client ID: WELL 6
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 05/04/21 11:50
Date Received: 05/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 05/12/21 14:00
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 05/11/21 16:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	7.20		ng/l	1.81	0.604	1
Perfluorohexanoic Acid (PFHxA)	8.65		ng/l	1.81	0.604	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.81	0.604	1
Perfluoroheptanoic Acid (PFHpA)	3.73		ng/l	1.81	0.604	1
Perfluorohexanesulfonic Acid (PFHxS)	2.68		ng/l	1.81	0.604	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.81	0.604	1
Perfluorooctanoic Acid (PFOA)	12.8		ng/l	1.81	0.604	1
Perfluorononanoic Acid (PFNA)	0.869	J	ng/l	1.81	0.604	1
Perfluorooctanesulfonic Acid (PFOS)	11.9		ng/l	1.81	0.604	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.81	0.604	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.81	0.604	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.81	0.604	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.81	0.604	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	0.869	J	ng/l	1.81	0.604	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.81	0.604	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.81	0.604	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.81	0.604	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.81	0.604	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	96		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	90		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	87		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	86		70-130

Project Name: DYKEER
Lab Number: L2123105
Project Number: DYKEER
Report Date: 05/13/21

SAMPLE RESULTS

Lab ID: L2123105-06
Client ID: FIELD BLANK
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 05/04/21 12:12
Date Received: 05/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 05/12/21 14:09
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 05/11/21 16:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.79	0.597	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.79	0.597	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.79	0.597	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.79	0.597	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.79	0.597	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.79	0.597	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.79	0.597	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.79	0.597	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.79	0.597	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.79	0.597	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.79	0.597	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.79	0.597	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.79	0.597	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.79	0.597	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.79	0.597	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.79	0.597	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.79	0.597	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.79	0.597	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	97		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	97		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	84		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	85		70-130

Project Name: DYKEER
Project Number: DYKEER

Lab Number: L2123105
Report Date: 05/13/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 120,522
Analytical Date: 05/10/21 07:44
Analyst: PS

Extraction Method: EPA 522
Extraction Date: 05/10/21 05:30

Parameter	Result	Qualifier	Units	RL	MDL
1,4 Dioxane by EPA 522 - Mansfield Lab for sample(s): 01-05 Batch: WG1496693-1					
1,4-Dioxane	ND		ug/l	0.150	0.150

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	78		70-130

Project Name: DYKEER
Project Number: DYKEER

Lab Number: L2123105
Report Date: 05/13/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 133,537.1
Analytical Date: 05/12/21 10:15
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 05/11/21 16:10

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab for sample(s): 01-06 Batch: WG1497363-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.668
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.668
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	2.00	0.668
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.668
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.668
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.668
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.668
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.668
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.668
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.668
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.668
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.668
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.668
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.668
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.668
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.668
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.668
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.668

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	91		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	88		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	93		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	91		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: DYKEER
Project Number: DYKEER

Lab Number: L2123105
Report Date: 05/13/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
1,4 Dioxane by EPA 522 - Mansfield Lab Associated sample(s): 01-05 Batch: WG1496693-2 WG1496693-3								
1,4-Dioxane	**64**		**62**		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	76		74		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: DYKEER

Project Number: DYKEER

Lab Number: L2123105

Report Date: 05/13/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-06 Batch: WG1497363-2								
Perfluorobutanesulfonic Acid (PFBS)	92		-		70-130	-		30
Perfluorohexanoic Acid (PFHxA)	108		-		70-130	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	98		-		70-130	-		30
Perfluoroheptanoic Acid (PFHpA)	112		-		70-130	-		30
Perfluorohexanesulfonic Acid (PFHxS)	125		-		70-130	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	89		-		70-130	-		30
Perfluorooctanoic Acid (PFOA)	102		-		70-130	-		30
Perfluorononanoic Acid (PFNA)	98		-		70-130	-		30
Perfluorooctanesulfonic Acid (PFOS)	99		-		70-130	-		30
Perfluorodecanoic Acid (PFDA)	84		-		70-130	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	103		-		70-130	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	82		-		70-130	-		30
Perfluoroundecanoic Acid (PFUnA)	112		-		70-130	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	88		-		70-130	-		30
Perfluorododecanoic Acid (PFDoA)	108		-		70-130	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	85		-		70-130	-		30
Perfluorotridecanoic Acid (PFTrDA)	106		-		70-130	-		30
Perfluorotetradecanoic Acid (PFTA)	108		-		70-130	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: DYKEER
Project Number: DYKEER

Lab Number: L2123105
Report Date: 05/13/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-06 Batch: WG1497363-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	96				70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	94				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	95				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	96				70-130

Matrix Spike Analysis

Batch Quality Control

Project Name: DYKEER

Project Number: DYKEER

Lab Number: L2123105

Report Date: 05/13/21

Parameter	*Native Sample*	*MS Added*	*MS Found*	*MS %Recovery*	*Qual*	*MSD Found*	*MSD %Recovery*	*Qual*	*Recovery Limits*	*RPD*	*Qual*	*RPD Limits*
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1497363-3 QC Sample: L2123006-01 Client ID: MS Sample												
Perfluorobutanesulfonic Acid (PFBS)	ND	1.71	1.54J	90		-	-		70-130	-		30
Perfluorohexanoic Acid (PFHxA)	ND	1.93	1.97	102		-	-		70-130	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	1.93	1.85J	96		-	-		70-130	-		30
Perfluoroheptanoic Acid (PFHpA)	ND	1.93	1.93	100		-	-		70-130	-		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	1.76	1.93	109		-	-		70-130	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	1.82	1.47J	80		-	-		70-130	-		30
Perfluorooctanoic Acid (PFOA)	ND	1.93	1.93	100		-	-		70-130	-		30
Perfluorononanoic Acid (PFNA)	ND	1.93	1.70J	88		-	-		70-130	-		30
Perfluorooctanesulfonic Acid (PFOS)	ND	1.79	1.47J	82		-	-		70-130	-		30
Perfluorodecanoic Acid (PFDA)	ND	1.93	1.31J	**68**		-	-		70-130	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	1.8	1.54J	86		-	-		70-130	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	1.93	1.35J	70		-	-		70-130	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	1.93	1.66J	86		-	-		70-130	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.93	1.20J	**62**		-	-		70-130	-		30
Perfluorododecanoic Acid (PFDoA)	ND	1.93	1.62J	84		-	-		70-130	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	1.82	1.28J	70		-	-		70-130	-		30
Perfluorotridecanoic Acid (PFTrDA)	ND	1.93	1.66J	86		-	-		70-130	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	1.93	1.66J	86		-	-		70-130	-		30

Matrix Spike Analysis

Batch Quality Control

Project Name: DYKEER

Project Number: DYKEER

Lab Number: L2123105

Report Date: 05/13/21

Parameter	*Native Sample*	*MS Added*	*MS Found*	*MS %Recovery*	*Qual*	*MSD Found*	*MSD %Recovery*	*Qual*	*Recovery Limits*	*RPD*	*Qual*	*RPD Limits*
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1497363-3 QC Sample: L2123006-01 Client ID: MS Sample												

Surrogate	*MS % Recovery*	*MS Qualifier*	*MSD % Recovery*	*MSD Qualifier*	*Acceptance Criteria*
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	91				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	**67**	Q			70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	81				70-130
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	92				70-130

Lab Duplicate Analysis
Batch Quality Control

Project Name: DYKEER
Project Number: DYKEER

Lab Number: L2123105
Report Date: 05/13/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1497363-4 QC Sample: L2123006-02 Client ID: DUP Sample						
Perfluorobutanesulfonic Acid (PFBS)	ND	ND	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	ND	ND	ng/l	NC		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	ND	ND	ng/l	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	ng/l	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	ND	ND	ng/l	NC		30
Perfluorononanoic Acid (PFNA)	ND	ND	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ng/l	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30
PFOA/PFOS, Total	ND	ND	ng/l	NC		30
PFAS, Total (5)	ND	ND	ng/l	NC		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: DYKEER
Project Number: DYKEER

Lab Number: L2123105
Report Date: 05/13/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1497363-4 QC Sample: L2123006-02 Client ID: DUP Sample						
PFAS, Total (6)	ND	ND	ng/l	NC		30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	89		92		70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	87		92		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	95		93		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	94		95		70-130

Project Name: DYKEER
Project Number: DYKEER

Lab Number: L2123105
Report Date: 05/13/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2123105-01A	Plastic 250ml Trizma preserved	C	NA		5.4	Y	Absent		A2-537.1(14)
L2123105-01B	Plastic 250ml Trizma preserved	C	NA		5.4	Y	Absent		A2-537.1(14)
L2123105-01C	Amber 500ml NaSulfite/NaHSO4 preserved	A	<4	<4	2.7	Y	Absent		A2-14DIOXANE-522(28)
L2123105-01D	Amber 500ml NaSulfite/NaHSO4 preserved	A	<4	<4	2.7	Y	Absent		A2-14DIOXANE-522(28)
L2123105-02A	Plastic 250ml Trizma preserved	C	NA		5.4	Y	Absent		A2-537.1(14)
L2123105-02B	Plastic 250ml Trizma preserved	C	NA		5.4	Y	Absent		A2-537.1(14)
L2123105-02C	Amber 500ml NaSulfite/NaHSO4 preserved	A	<4	<4	2.7	Y	Absent		A2-14DIOXANE-522(28)
L2123105-02D	Amber 500ml NaSulfite/NaHSO4 preserved	A	<4	<4	2.7	Y	Absent		A2-14DIOXANE-522(28)
L2123105-03A	Plastic 250ml Trizma preserved	C	NA		5.4	Y	Absent		A2-537.1(14)
L2123105-03B	Plastic 250ml Trizma preserved	C	NA		5.4	Y	Absent		A2-537.1(14)
L2123105-03C	Amber 500ml NaSulfite/NaHSO4 preserved	A	<4	<4	2.7	Y	Absent		A2-14DIOXANE-522(28)
L2123105-03D	Amber 500ml NaSulfite/NaHSO4 preserved	A	<4	<4	2.7	Y	Absent		A2-14DIOXANE-522(28)
L2123105-04A	Plastic 250ml Trizma preserved	C	NA		5.4	Y	Absent		A2-537.1(14)
L2123105-04B	Plastic 250ml Trizma preserved	C	NA		5.4	Y	Absent		A2-537.1(14)
L2123105-04C	Amber 500ml NaSulfite/NaHSO4 preserved	A	<4	<4	2.7	Y	Absent		A2-14DIOXANE-522(28)
L2123105-04D	Amber 500ml NaSulfite/NaHSO4 preserved	A	<4	<4	2.7	Y	Absent		A2-14DIOXANE-522(28)
L2123105-05A	Plastic 250ml Trizma preserved	C	NA		5.4	Y	Absent		A2-537.1(14)
L2123105-05B	Plastic 250ml Trizma preserved	C	NA		5.4	Y	Absent		A2-537.1(14)
L2123105-05C	Amber 500ml NaSulfite/NaHSO4 preserved	A	<4	<4	2.7	Y	Absent		A2-14DIOXANE-522(28)
L2123105-05D	Amber 500ml NaSulfite/NaHSO4 preserved	A	<4	<4	2.7	Y	Absent		A2-14DIOXANE-522(28)
L2123105-06A	Plastic 250ml Trizma preserved	C	NA		5.4	Y	Absent		A2-537.1(14)

*Values in parentheses indicate holding time in days

Project Name: DYKEER
Project Number: DYKEER

Lab Number: L2123105
Report Date: 05/13/21

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

Project Name: DYKEER **Lab Number:** L2123105

Project Number: DYKEER **Report Date:** 05/13/21

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	DYKEER	**Lab Number:**	L2123105
Project Number:	DYKEER	**Report Date:**	05/13/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	DYKEER	**Lab Number:**	L2123105
Project Number:	DYKEER	**Report Date:**	05/13/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Project Name:	DYKEER	**Lab Number:**	L2123105
Project Number:	DYKEER	**Report Date:**	05/13/21

REFERENCES

120 Determination of 1,4-Dioxane in Drinking Water by Solid Phase Extraction (SPE) and Gas Chromatography/Mass Spectrometry (GC/MS) with Selected Ion Monitoring (SIM). EPA Method 522, EPA/600/R-08/101. Version 1.0, September 2008.

133 Determination of Selected Per- and Polyfluorinated Alkyl Substances in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). EPA Method 537.1, EPA/600/R-18/352. Version 1.0, November 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 5/5/21

ALPHA Job #: L2123105

Client Information

Client: Environmental Consultants
Address: 4 Commerce Ste. 2A
Poughkeepsie, NY 12603
Phone: 845-486-1030
Fax:
Email: slandell@ecnewyork.com

Project Information

Project Name: Dykeer
Project Location: Krystal Drive Somers, NY
Project #: Dykeer
(Use Project name as Project #) ☐
Project Manager:
ALPHAQuote #:

Turn-Around Time

Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☑ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☐ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other: NA

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PFA-537.1- Full List	1,4 Dioxane-522	Sample Specific Comments	Total Bottles
L2123105-01	EP	5-4-21	12:10	DW	~~CK~~ JC	X	X	Field preserved to ph<4	4
-02	Well 1	5-4-21	12:00	DW	CK	X	X	Field preserved to ph<4	4
-03	Well 3	5-4-21	12:10	DW	CK	X	X	Field preserved to ph<4	4
-04	Well 4	5-4-21	11:50	DW	CK	X	X	Field preserved to ph<4	4
-05	Well 6	5-4-21	11:50	DW	~~CK~~ JC	X	X	Field preserved to ph<4	4
-06	Field Blank	5-4-21	12:12	Lab H2O	~~CK~~ JC	X			2

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Container Type	P	A						
Preservative								

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
Calvin Koonitzer	5/4/21 16:28		
Wendy Harvey	5/5/21 4:00		5/5/21 0410
T. Humble	5/5/21 0530		5/5/21 0513

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.

Form No: 01-25 (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2129157
Client:	Environmental Consultants PO Box 3148 Pouchkeepsie, NY 12603
ATTN:	Stephen Landell
Phone:	(845) 486-1030
Project Name:	DYKEER
Project Number:	DYKEER
Report Date:	06/14/21

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: DYKEER
Project Number: DYKEER

Lab Number: L2129157
Report Date: 06/14/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2129157-01	EP	DW	KRYSTAL DRIVE SOMERS, NY	06/01/21 13:15	06/01/21
L2129157-02	WELL 1	DW	KRYSTAL DRIVE SOMERS, NY	06/01/21 13:13	06/01/21
L2129157-03	WELL 3	DW	KRYSTAL DRIVE SOMERS, NY	06/01/21 13:16	06/01/21
L2129157-04	WELL 4	DW	KRYSTAL DRIVE SOMERS, NY	06/01/21 13:16	06/01/21
L2129157-05	WELL 6	DW	KRYSTAL DRIVE SOMERS, NY	06/01/21 13:18	06/01/21
L2129157-06	FIELD BLANK	DW	KRYSTAL DRIVE SOMERS, NY	06/01/21 13:10	06/01/21

Project Name:	DYKEER	**Lab Number:**	L2129157
Project Number:	DYKEER	**Report Date:**	06/14/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	DYKEER	**Lab Number:**	L2129157
Project Number:	DYKEER	**Report Date:**	06/14/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2129157-04: The collection date and time on the chain of custody was 01-JUN-21 13:16; however, the collection date/time on the container label was 01-JUN-21 13:18. At the client's request, the collection date/time is reported as 01-JUN-21 13:16.

L2129157-05: The collection date and time on the chain of custody was 01-JUN-21 13:18; however, the collection date/time on the container label was 01-JUN-21 13:16. At the client's request, the collection date/time is reported as 01-JUN-21 13:18.

Perfluorinated Alkyl Acids

L2129157-05R: The sample was re-analyzed due to QC failures in the original analysis. The results of the re-analysis are reported.

WG1508193-1R and WG1508193-2R: The sample was re-analyzed due to QC failures in the original analysis. The results of the re-analysis are reported.

The WG1508193-2R LCS recovery, associated with L2129157-01, -02, -03, -04, -05R, and -06, is above the acceptance criteria for perfluorotetradecanoic acid (pfta) (137%); however, the associated samples are non-detect to the RL for this target analyte. The results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 06/14/21

ORGANICS

SEMIVOLATILES

Project Name: DYKEER
Lab Number: L2129157
Project Number: DYKEER
Report Date: 06/14/21

SAMPLE RESULTS

Lab ID: L2129157-01
Client ID: EP
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 06/01/21 13:15
Date Received: 06/01/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 06/07/21 16:57
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 06/06/21 11:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	5.84		ng/l	1.79	0.598	1
Perfluorohexanoic Acid (PFHxA)	7.30		ng/l	1.79	0.598	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.79	0.598	1
Perfluoroheptanoic Acid (PFHpA)	3.40		ng/l	1.79	0.598	1
Perfluorohexanesulfonic Acid (PFHxS)	1.54	J	ng/l	1.79	0.598	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.79	0.598	1
Perfluorooctanoic Acid (PFOA)	12.2		ng/l	1.79	0.598	1
Perfluorononanoic Acid (PFNA)	0.680	J	ng/l	1.79	0.598	1
Perfluorooctanesulfonic Acid (PFOS)	10.6		ng/l	1.79	0.598	1
Perfluorodecanoic Acid (PFDA)	0.608	J	ng/l	1.79	0.598	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.79	0.598	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.79	0.598	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.79	0.598	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	0.680	J	ng/l	1.79	0.598	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.79	0.598	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.79	0.598	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.79	0.598	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.79	0.598	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	100		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	98		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	98		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	93		70-130

Project Name: DYKEER
Lab Number: L2129157
Project Number: DYKEER
Report Date: 06/14/21

SAMPLE RESULTS

Lab ID: L2129157-02
Client ID: WELL 1
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 06/01/21 13:13
Date Received: 06/01/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 06/07/21 17:06
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 06/06/21 11:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	8.05		ng/l	1.79	0.597	1
Perfluorohexanoic Acid (PFHxA)	9.62		ng/l	1.79	0.597	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.79	0.597	1
Perfluoroheptanoic Acid (PFHpA)	4.33		ng/l	1.79	0.597	1
Perfluorohexanesulfonic Acid (PFHxS)	2.18		ng/l	1.79	0.597	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.79	0.597	1
Perfluorooctanoic Acid (PFOA)	14.9		ng/l	1.79	0.597	1
Perfluorononanoic Acid (PFNA)	0.930	J	ng/l	1.79	0.597	1
Perfluorooctanesulfonic Acid (PFOS)	15.8		ng/l	1.79	0.597	1
Perfluorodecanoic Acid (PFDA)	0.894	J	ng/l	1.79	0.597	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.79	0.597	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	0.930	J	ng/l	1.79	0.597	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.79	0.597	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	1.64	J	ng/l	1.79	0.597	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.79	0.597	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.79	0.597	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.79	0.597	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.79	0.597	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	101		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	98		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	102		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	100		70-130

Project Name: DYKEER
Lab Number: L2129157
Project Number: DYKEER
Report Date: 06/14/21

SAMPLE RESULTS

Lab ID: L2129157-03
Client ID: WELL 3
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 06/01/21 13:16
Date Received: 06/01/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 06/07/21 17:15
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 06/06/21 11:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	4.29		ng/l	1.79	0.596	1
Perfluorohexanoic Acid (PFHxA)	7.29		ng/l	1.79	0.596	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.79	0.596	1
Perfluoroheptanoic Acid (PFHpA)	3.61		ng/l	1.79	0.596	1
Perfluorohexanesulfonic Acid (PFHxS)	1.36	J	ng/l	1.79	0.596	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.79	0.596	1
Perfluorooctanoic Acid (PFOA)	12.5		ng/l	1.79	0.596	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.79	0.596	1
Perfluorooctanesulfonic Acid (PFOS)	8.64		ng/l	1.79	0.596	1
Perfluorodecanoic Acid (PFDA)	0.607	J	ng/l	1.79	0.596	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.79	0.596	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.79	0.596	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.79	0.596	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.79	0.596	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.79	0.596	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.79	0.596	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.79	0.596	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.79	0.596	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	99		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	100		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	95		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	99		70-130

Project Name: DYKEER
Project Number: DYKEER
Lab Number: L2129157
Report Date: 06/14/21

SAMPLE RESULTS

Lab ID: L2129157-04
Client ID: WELL 4
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 06/01/21 13:16
Date Received: 06/01/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 06/07/21 17:24
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 06/06/21 11:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	6.54		ng/l	1.79	0.597	1
Perfluorohexanoic Acid (PFHxA)	7.33		ng/l	1.79	0.597	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.79	0.597	1
Perfluoroheptanoic Acid (PFHpA)	4.11		ng/l	1.79	0.597	1
Perfluorohexanesulfonic Acid (PFHxS)	1.86		ng/l	1.79	0.597	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.79	0.597	1
Perfluorooctanoic Acid (PFOA)	13.9		ng/l	1.79	0.597	1
Perfluorononanoic Acid (PFNA)	0.751	J	ng/l	1.79	0.597	1
Perfluorooctanesulfonic Acid (PFOS)	10.8		ng/l	1.79	0.597	1
Perfluorodecanoic Acid (PFDA)	0.608	J	ng/l	1.79	0.597	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.79	0.597	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.79	0.597	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.79	0.597	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.79	0.597	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.79	0.597	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.79	0.597	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.79	0.597	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.79	0.597	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	95		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	97		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	94		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	96		70-130

Project Name: DYKEER
Project Number: DYKEER
Lab Number: L2129157
Report Date: 06/14/21

SAMPLE RESULTS

Lab ID: L2129157-05 R
Client ID: WELL 6
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 06/01/21 13:18
Date Received: 06/01/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 06/10/21 12:48
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 06/06/21 11:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	8.52		ng/l	1.80	0.603	1
Perfluorohexanoic Acid (PFHxA)	10.4		ng/l	1.80	0.603	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.80	0.603	1
Perfluoroheptanoic Acid (PFHpA)	4.51		ng/l	1.80	0.603	1
Perfluorohexanesulfonic Acid (PFHxS)	2.78		ng/l	1.80	0.603	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.80	0.603	1
Perfluorooctanoic Acid (PFOA)	16.1		ng/l	1.80	0.603	1
Perfluorononanoic Acid (PFNA)	0.903	J	ng/l	1.80	0.603	1
Perfluorooctanesulfonic Acid (PFOS)	14.3		ng/l	1.80	0.603	1
Perfluorodecanoic Acid (PFDA)	0.614	J	ng/l	1.80	0.603	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.80	0.603	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.80	0.603	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.80	0.603	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	1.01	J	ng/l	1.80	0.603	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.80	0.603	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.80	0.603	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.80	0.603	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.80	0.603	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	112		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	97		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	95		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	100		70-130

Project Name: DYKEER
Lab Number: L2129157
Project Number: DYKEER
Report Date: 06/14/21

SAMPLE RESULTS

Lab ID: L2129157-06
Client ID: FIELD BLANK
Sample Location: KRYSTAL DRIVE SOMERS, NY

Date Collected: 06/01/21 13:10
Date Received: 06/01/21
Field Prep: Not Specified

Sample Depth:
Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 06/07/21 17:41
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 06/06/21 11:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.84	0.614	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.84	0.614	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.84	0.614	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.84	0.614	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.84	0.614	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.84	0.614	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.84	0.614	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.84	0.614	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.84	0.614	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.84	0.614	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.84	0.614	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.84	0.614	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.84	0.614	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.84	0.614	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.84	0.614	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.84	0.614	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.84	0.614	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.84	0.614	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	95		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	99		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	94		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	97		70-130

Project Name: DYKEER
Project Number: DYKEER

Lab Number: L2129157
Report Date: 06/14/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 133,537.1
Analytical Date: 06/07/21 14:19
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 06/06/21 11:45

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab for sample(s): 01-06 Batch: WG1508193-1 R					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.668
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.668
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	2.00	0.668
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.668
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.668
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.668
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.668
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.668
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.668
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.668
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.668
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.668
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.668
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.668
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.668
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.668
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.668
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.668

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	107		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	117		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	106		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	96		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: DYKEER

Project Number: DYKEER

Lab Number: L2129157

Report Date: 06/14/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-06 Batch: WG1508193-2								
Perfluorobutanesulfonic Acid (PFBS)	96		-		70-130	-		30
Perfluorohexanoic Acid (PFHxA)	94		-		70-130	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	79		-		70-130	-		30
Perfluoroheptanoic Acid (PFHpA)	103		-		70-130	-		30
Perfluorohexanesulfonic Acid (PFHxS)	94		-		70-130	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	96		-		70-130	-		30
Perfluorooctanoic Acid (PFOA)	102		-		70-130	-		30
Perfluorononanoic Acid (PFNA)	100		-		70-130	-		30
Perfluorooctanesulfonic Acid (PFOS)	107		-		70-130	-		30
Perfluorodecanoic Acid (PFDA)	99		-		70-130	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	100		-		70-130	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	90		-		70-130	-		30
Perfluoroundecanoic Acid (PFUnA)	107		-		70-130	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	96		-		70-130	-		30
Perfluorododecanoic Acid (PFDoA)	103		-		70-130	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	91		-		70-130	-		30
Perfluorotridecanoic Acid (PFTrDA)	117		-		70-130	-		30
Perfluorotetradecanoic Acid (PFTA)	**137**	Q	-		70-130	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: DYKEER
Project Number: DYKEER

Lab Number: L2129157
Report Date: 06/14/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-06 Batch: WG1508193-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	101				70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	84				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	105				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	105				70-130

Matrix Spike Analysis

Batch Quality Control

Project Name: DYKEER

Project Number: DYKEER

Lab Number: L2129157

Report Date: 06/14/21

Parameter	*Native Sample*	*MS Added*	*MS Found*	*MS %Recovery*	*Qual*	*MSD Found*	*MSD %Recovery*	*Qual*	*Recovery Limits*	*RPD*	*Qual*	*RPD Limits*
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1508193-3 QC Sample: L2129017-02 Client ID: MS Sample												
Perfluorobutanesulfonic Acid (PFBS)	ND	133	98.1	74		-	-		70-130	-		30
Perfluorohexanoic Acid (PFHxA)	ND	149	113	76		-	-		70-130	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	149	117	78		-	-		70-130	-		30
Perfluoroheptanoic Acid (PFHpA)	ND	149	109	73		-	-		70-130	-		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	136	83.3	**61**	Q	-	-		70-130	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	141	139	98		-	-		70-130	-		30
Perfluorooctanoic Acid (PFOA)	ND	149	124	83		-	-		70-130	-		30
Perfluorononanoic Acid (PFNA)	ND	149	110	74		-	-		70-130	-		30
Perfluorooctanesulfonic Acid (PFOS)	ND	139	105	76		-	-		70-130	-		30
Perfluorodecanoic Acid (PFDA)	ND	149	132	88		-	-		70-130	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	139	84.4	**61**	Q	-	-		70-130	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	149	108	72		-	-		70-130	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	149	123	82		-	-		70-130	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	149	105	70		-	-		70-130	-		30
Perfluorododecanoic Acid (PFDoA)	ND	149	117	78		-	-		70-130	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	141	96.1	**68**	Q	-	-		70-130	-		30
Perfluorotridecanoic Acid (PFTrDA)	ND	149	122	82		-	-		70-130	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	149	235	**157**	Q	-	-		70-130	-		30

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Parameter	*Native Sample*	*MS Added*	*MS Found*	*MS %Recovery*	*Qual*	*MSD Found*	*MSD %Recovery*	*Qual*	*Recovery Limits*	*RPD*	*Qual*	*RPD Limits*
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1508193-3 QC Sample: L2129017-02 Client ID: MS Sample												

Surrogate	*MS % Recovery*	*MS Qualifier*	*MSD % Recovery*	*MSD Qualifier*	*Acceptance Criteria*
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	109				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	102				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	106				70-130
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	102				70-130

Lab Duplicate Analysis
Batch Quality Control

Project Name: DYKEER
Project Number: DYKEER

Lab Number: L2129157
Report Date: 06/14/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1508193-4 QC Sample: L2129017-03 Client ID: DUP Sample						
Perfluorobutanesulfonic Acid (PFBS)	ND	ND	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	ND	ND	ng/l	NC		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	ND	ND	ng/l	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	ng/l	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	ND	ND	ng/l	NC		30
Perfluorononanoic Acid (PFNA)	ND	ND	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ng/l	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: DYKEER
Project Number: DYKEER

Lab Number: L2129157
Report Date: 06/14/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1508193-4 QC Sample: L2129017-03 Client ID: DUP Sample

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	98		101		70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	108		103		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	97		99		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	96		95		70-130

Project Name: DYKEER
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Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2129157-01A	Plastic 250ml Trizma preserved	A	NA		2.4	Y	Absent		A2-537.1(14)
L2129157-01B	Plastic 250ml Trizma preserved	A	NA		2.4	Y	Absent		A2-537.1(14)
L2129157-02A	Plastic 250ml Trizma preserved	A	NA		2.4	Y	Absent		A2-537.1(14)
L2129157-02B	Plastic 250ml Trizma preserved	A	NA		2.4	Y	Absent		A2-537.1(14)
L2129157-03A	Plastic 250ml Trizma preserved	A	NA		2.4	Y	Absent		A2-537.1(14)
L2129157-03B	Plastic 250ml Trizma preserved	A	NA		2.4	Y	Absent		A2-537.1(14)
L2129157-04A	Plastic 250ml Trizma preserved	A	NA		2.4	Y	Absent		A2-537.1(14)
L2129157-04B	Plastic 250ml Trizma preserved	A	NA		2.4	Y	Absent		A2-537.1(14)
L2129157-05A	Plastic 250ml Trizma preserved	A	NA		2.4	Y	Absent		A2-537.1(14)
L2129157-05B	Plastic 250ml Trizma preserved	A	NA		2.4	Y	Absent		A2-537.1(14)
L2129157-06A	Plastic 250ml Trizma preserved	A	NA		2.4	Y	Absent		A2-537.1(14)

*Values in parentheses indicate holding time in days

Project Name: DYKEER
Project Number: DYKEER

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PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

Project Name:	DYKEER	**Lab Number:**	L2129157
Project Number:	DYKEER	**Report Date:**	06/14/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	DYKEER	**Lab Number:**	L2129157
Project Number:	DYKEER	**Report Date:**	06/14/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	DYKEER	**Lab Number:**	L2129157
Project Number:	DYKEER	**Report Date:**	06/14/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

REFERENCES

133 Determination of Selected Per- and Polyfluorinated Alkyl Substances in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). EPA Method 537.1, EPA/600/R-18/352. Version 1.0, November 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 6/2/21

ALPHA Job #: L2129157

Client Information
Client: Environmental Consultants
Address: 4 Commerce Ste. 2A
Poughkeepsie, NY 12603
Phone: 845-486-1030
Fax:
Email: slandell@ecnewyork.com

Project Information
Project Name: Dykeer
Project Location: Krystal Drive Somers, NY
Project #: Dykeer
(Use Project name as Project #) ☐
Project Manager:
ALPHAQuote #:

Turn-Around Time
Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information
☐ Same as Client Info
PO #

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☑ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other: NA

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PFA-537.1- Full List	Sample Specific Comments	Total # Bottles
29157-01	EP	6/1/21	13:15	DW	CK	X		2
-02	Well 1	6/1/21	13:13	DW	CK	X		2
-03	Well 3	6/1/21	13:16	DW	CK	X		2
-04	Well 4	6/1/21	13:16	DW	CK	X		2
-05	Well 6	6/1/21	13:19	DW	CK	X		2
-06	Field Blank	6/1/21	13:10	Lab H2O	CK	X		2

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	P									
Preservative										

Relinquished By:	Date/Time	Received By:	Date/Time
Calvin Kimball AAL	6/1/21 17:38		6/2/21 00:40
	6/2/21 04:00		6/2/21 0410
T. Hubbell	6/2/21 0545	T. Hubbell - AAL	6/2/21 0545

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.

Form No: 01-25 (rev. 30-Sept-2013)