Fact Sheet
NPDES Permit No. NC0090042

Permit Writer/Email Contact: Sergei Chernikov, Ph.D., sergei.chernikov@ncdenr.gov
Date: The Fact Sheet was initiated on April 27, 2020. The Final Fact Sheet was finalized on September 14, 2022. Text based on the draft permit appears in blue, revisions are in red.
Division/Branch: NC Division of Water Resources / NPDES Complex Permitting
Fact Sheet Template: Version 09Jan2017

Permitting Action:
☐ Renewal
☐ Renewal with Expansion
☒ New Discharge
☐ Modification (Fact Sheet should be tailored to mod request)

Note: A complete application should include the following:
- For New Dischargers, EPA Form 2A or 2D requirements, Engineering Alternatives Analysis, Fee
- For Existing Dischargers (POTW), EPA Form 2A, 3 effluent pollutant scans, 4 2^{nd} species WET tests.
- For Existing Dischargers (Non-POTW), EPA Form 2C with correct analytical requirements based on industry category.

Complete applicable sections below. If not applicable, enter NA.

1. Basic Facility Information

Facility Information	
Applicant/Facility Name:	The Chemours Company / Chemours Fayetteville Works
Applicant Address:	1007 Market Street, Wilmington, DE 19899
Facility Address:	22828 NC Highway 87 W, Fayetteville, NC 28306-7332
Permitted Flow:	2.38 MGD
Facility Type/Waste:	MAJOR Industrial
Facility Class:	III
Treatment Units:	chemical oxidation, pH adjustment to precipitate metals, ultrafiltration membranes to remove total suspended solids and other constituents, granulated active carbon (GAC) system to remove PFAS compounds, and associated equipment
Pretreatment Program (Y/N):	N
County:	Bladen
Region:	Fayetteville

Briefly describe the proposed permitting action and facility background:

Chemours is a major industrial facility. Chemours operates an ion exchange monomers process and a polymer processing aid process. Also on-site, DuPont operates a polyvinyl fluoride process, and Kuraray operates Butacite and SentryGlas processes.

Beginning in mid-2017, PFAS compounds were found in the Cape Fear River. Certain compounds of concern, including GenX or HFPO dimer acid (HFPO-DA), were traced back to Chemours. Health effects of many PFAS are currently not well-known, but some are possibly linked health effects include kidney disease, developmental effects to fetuses, and some forms of cancer. To-date, EPA and the state of NC have not released/approved of any regulatory standards for these compounds. EPA has released a drinking water health advisory of 70 ng/L for the sum of PFOA and PFOS. NC Department of Health and Human Services (DHHS) has released a drinking water health goal (for the most vulnerable population) of 140 ng/L for GenX.

In order to reduce PFAS loading to the Cape Fear River pursuant to the Consent Order entered by the Bladen County Superior Court on February 25, 2019 (“Consent Order”), Chemours has requested a new NPDES permit for the discharge of treated groundwater, treated stormwater, and treated surface water from seeps located on its property.

The flow from Outfall 004 consists primarily of contaminated groundwater, stormwater, and seep water, which must be treated to remove at least 99% of indicator parameters HFPO-DA (GenX), PFMOAA, and PMPA. The treatment system shall meet such discharge limits as shall be set by DEQ, and shall, in addition and at a minimum, be at least 99% effective in controlling indicator parameters, HFPO-DA, PFMOAA, and PMPA, i.e. 99% removal of these parameters. The issuance of this permit will allow Chemours to begin remediation on this portion of it’s site to meet the Consent Order requirement and reduce PFAS loading to the Cape Fear River.

Additionally, as part of the Consent Order, Chemours was required to conduct a Mass Loading Assessment. The summary report was submitted to DEQ on December 6, 2019 and updated quarterly since then. The report assesses pathways for per- and polyfluoroalkyl substances (PFAS) on and around the site and their potential mass loadings to the Cape Fear River using data from the May, June, and September 2019 sampling for the facility. Chemours preliminarily estimated that treating groundwater and seeps will reduce overall loading of Total Table 3+ PFAS compounds to the river by 51% based on an average of these two sampling events (Cape Fear River PFAS Loading Reduction Plan – Supplemental Information Report, November 2019). According to Chemours’ most recent mass loading report, onsite groundwater currently contributes over 60% of the remaining PFAS loading to the Cape Fear River.

The outfall from the treatment system is named Outfall 004 in this new permit to allow for the potential consolidation of Chemours’ other NPDES wastewater permit, NC0003573, in the future.

- Outfall 004 – Treated contaminated groundwater, stormwater, and surface water from seeps A and B.

The treatment system for the contaminated groundwater, stormwater, and seeps (seep A and seep B) is designed to treat PFAS compounds, and remove 99% of the PFAS compounds measured by indicator parameters HFPO-DA (GenX), PMPA, and PFMOAA. The system will treat groundwater from the series of extraction wells (~64 wells) and surface water (including stormwater) from seep A and seep B, it is capable of treating peak flows of 2.9 MGD, the average flow is projected to be 2.38 MGD. Most of the flow (91%) to the treatment system will be coming from groundwater. All the dry weather flow from seeps A and B as well as 0.5 inches of rain during 24-hour period will be captured and treated. This extracted contaminated groundwater, stormwater, and surface water from seeps A and B would otherwise flow untreated to the Cape Fear River.

The treatment system will include a chemical oxidation and pH adjustment to precipitate metals, ultrafiltration membranes to remove precipitated metals and other total suspended solids, a granulated active carbon (GAC) system to remove PFAS compounds, and other associated equipment. Treated effluent will be monitored and sampled at an internal point considered to be Outfall 004 then piped and mixed with existing wastewaters discharged through Outfall 002. The average flow from Outfall 004 is expected to be 2.38 MGD, and the average flow from Outfall 002 prior to the addition of the Outfall 004 is 23.17 MGD. Solids associated with reject streams from filtration and GAC systems will undergo dewatering through a thickening tank and filter press or centrifugation, from which sludge cake will be disposed of offsite and the press water will be recycled to the influent of the thickening tanks.

This permit will not authorize the discharge of any process wastewater from Chemours. The only process wastewater discharged comes from Chemours' tenants DuPont and Kuraray.

Installation of the treatment system that will remove 99% of the PFAS compounds from this groundwater, stormwater, and seeps pumped to this system and will result in significant reduction of the PFAS compounds in the effluent based upon data provided by Chemours.

The solids generated in the treatment plant will be tested and shipped off-site either to an incinerator or a licensed landfill. The GAC will be sent back to the manufacturer for recycling.

Projected Mass Load Reductions based on the indicator parameters of HFPO-DA, PMPA, and PFMOAA are calculated below.

Groundwater/Seeps
HFPO-DA= 0.0122 mg/L x 0.99 x 2.38 MGD x 8.34 x 365 days = 87.5 lb/year
PFMOAA= 0.0643 mg/L x 0.99 x 2.38 MGD x 8.34 x 365 days = 461.2 lb/year
PMPA= 0.0132 mg/L x 0.99 x 2.38 MGD x 8.34 x 365 days = 94.7 lb/year
Total reduction= 643.4 lb/year

(Concentration of these indicator parameters were obtained from the Chemours Fayetteville Works NPDES Permit Application for the Groundwater Treatment System dated June 13, 2021. Average concentration for each parameter is used for calculations).

In accordance with North Carolina General Statutes, an in-person public hearing was held on June 21, and a virtual public hearing was held on June 23, 2022, regarding the proposed NPDES permit. Notice of the proposals and the original hearing was published on May 17, 2022, in the Wilmington Star-News (notice is attached). On May 17, 2022, a news release about the public hearing was sent to media statewide as well as parties who voluntarily signed up to receive it, such as attorneys, businesses, and citizens. On May 17, 2022, an announcement of the public hearing was sent to the DWRPublicNotices List serve.

During both hearings, general information about the hearing as well as the draft permit was followed by DWR presentations with detailed information about the draft permit. Speakers provided public comments on the draft permit after the DWR presentation. Written comments were accepted for the proposed NPDES permit from May 17, 2022, through June 24, 2022. The Hearing Officer's Report details the public comments received.

Since the release of the draft permit, on June 15, 2022, EPA issued a lifetime, drinking water health advisory of 10 ng/L for GenX chemicals. EPA's drinking water advisory levels "identify the concentration of a contaminant in drinking water at which adverse health effects are not anticipated to occur over specific exposure durations."

Based on review of the public record and written/oral comments received during the public hearing process, and further evaluation and consideration of the treatment data from Outfall 003, the following changes have been made to the draft permit:

1. Incorporated the wall maintenance requirements into the permit.
2. Revised initial limits for PFMOAA from 640 ng/L to 320 ng/L, and for PMPA from 130 ng/L to 100 ng/L.
3. Revised the limits for 3 indicator parameters to <10.0 ng/L for HFPO-DA (GenX), 10 ng/L for PMPA, and < 20.0 ng/L for PFMOAA after a 6-month optimization period.

Please note that as a matter of record a fact sheet contains both the original Rational for the Draft Permit (blue text) based on the information available at that time and the changes made after the Public Hearings oral and written comments and further evaluations (red text). Changes to the draft permit are summarized at the end of the Fact Sheet in Section 17.

2. Receiving Waterbody Information

[Outfall 004]

Receiving Waterbody Information	
Outfalls/Receiving Stream(s):	Internal Outfall 004 discharges through Outfall 002 to Cape Fear River
Stream Segment:	18-(26.25)
Stream Classification:	C, WS-IV
Drainage Area (mi^2):	4852
Summer 7Q10 (cfs):	8:1 dilution for Outfall 002 (17.14 cfs, the number is based on the modeling)
Winter 7Q10 (cfs):	603
30Q2 (cfs):	900
Average Flow (cfs):	4220
IWC (% effluent):	12.5% (based on the model) applies to Outfall 002
303(d) listed/parameter:	No, the segment is not listed on the 2018 303(d) list
Subject to TMDL/parameter:	Yes – State-wide Mercury TMDL implementation.
Sub-basin/HUC:	Outfall 002: 03-06-16 / HUC: 03030005
USGS Topo Quad:	Duart

3. Effluent Data Summary

N/A – New Discharge

4. Instream Data Summary

Instream monitoring may be required in certain situations, for example: 1) to verify model predictions when model results for instream DO are within 1 mg/l of instream standard at full permitted flow; 2) to verify model predictions for outfall diffuser; 3) to provide data for future TMDL; 4) based on other instream concerns. Instream monitoring may be conducted by the Permittee, and there are also Monitoring Coalitions established in several basins that conduct instream sampling for the Permittee (in which case instream monitoring is waived in the permit as long as coalition membership is maintained).

If applicable, summarize any instream data and what instream monitoring will be proposed for this permit action: As part of the Consent Order (Paragraph 11(d)), Chemours is required to sample its intake, discharge (Outfall 002), and a multitude of additional on-site locations for PFAS compounds. These sampling efforts are detailed in the Updated PFAS Characterization Plan, dated May 1, 2019. This plan and the sampling locations were conditionally approved by DWR on June 19, 2019.

Chemours' existing NPDES permit, NC0003573, has instream monitoring requirements for temperature, dissolved oxygen, and conductivity on a weekly basis to evaluate the effects of its discharge on the receiving stream. Chemours is a member of the Middle Cape Fear Basin Association, with upstream coalition station B8290000 (approximately 1 mile upstream of Outfall 002) and downstream coalition station B8302000 (approximately 4 miles downstream of Outfall 002). Instream monitoring for PFAS compounds is required in Chemours Permit NC0089915 (Outfall 003).

In order to evaluate impact of the remediation activities on the instream concentration of PFAS a comprehensive monitoring at four different transects along the Cape Fear River will be added to the permit (please see Special Condition A. (7.)).

Is this facility a member of a Monitoring Coalition with waived instream monitoring (Y/N): Y

Name of Monitoring Coalition: Middle Cape Fear Basin Association

5. Compliance Summary

Summarize the compliance record with permit effluent limits (past 5 years): This is a new permit.

Summarize the compliance record with aquatic toxicity test limits and any second species test results (past 5 years): This is a new permit.

Summarize the results from the most recent compliance inspection: This is a new permit.

6. Water Quality-Based Effluent Limitations (WQBELs)

<u>Dilution and Mixing Zones</u>

In accordance with 15A NCAC 2B.0206, the following stream flows are used for dilution considerations for development of WQBELs: 1Q10 streamflow (acute Aquatic Life); 7Q10 streamflow (chronic Aquatic Life; non-carcinogen HH); 30Q2 streamflow (aesthetics); annual average flow (carcinogen, HH).

If applicable, describe any other dilution factors considered (e.g., based on CORMIX model results):

The proposed treatment system will discharge from Internal Outfall 004, the treated wastewater from this Outfall will be routed to Cape Fear River through Outfall 002. Geosyntec Consultants of NC has submitted

CORMIX model results on behalf of The Chemours Company FC, LLC for the primary discharge Outfall 002 of their Fayetteville Works site discharging to the Cape Fear River, classified WS-IV, approximately 1,500 feet above the William O Huske Dam aka Lock and Dam 3 in Bladen County. The discharge was modeled because of concerns over incomplete mixing due to the presence of the lock and dam system and background concentrations from site runoff, aerial deposition, seepage, and groundwater flow containing per-and polyfluoralkyl substances (PFAS) into the river.

The CORMIX model river schematization used The Army Corps of Engineers 2016 bathymetric survey data which showed a consistent river cross-section profile from the point of discharge to just above Lock and Dam 3. Critical river flows were obtained from the USGS in June 2019, which showed a marked decrease in critical flow statistics from those used in prior permits. The lower flows reflect changes in the B. Everett Jordan Lake Drought Contingency Plan formally approved in 2008 and operationally in effect since 2007. Water levels in the model were determined from the continuous record USGS stream gage (Station 02105500) located at the lock and dam. Outfall parameters in the model were based on the existing outfall configuration.

The modeled pollutant of concern is HFPO-DA which showed continued mixing up to 21.2 m from the outfall where the plume begins to exhibit passive ambient diffusion with little additional dilution. At this point the effluent plume dilution is 8:1 until model end. The 8:1 dilution is used to establish dilution based effluent limitations for parameters with little to no background concentrations. The 8:1 dilution is both more conservative than and supported over instream waste concentration (IWC) based limitations normally performed under 15A NCAC 2B. The IWC from using standard procedures under 7Q10 flow conditions of 467 cubic feet per second (cfs) would be 9% versus 12.5% at an 8:1 dilution.

If applicable, describe any mixing zones established in accordance with 15A NCAC 2B.0204(b): N/A

<u>Oxygen-Consuming Waste Limitations</u>

Limitations for oxygen-consuming waste (e.g., BOD) are generally based on water quality modeling to ensure protection of the instream dissolved oxygen (DO) water quality standard. Secondary TBEL limits (e.g., BOD= 30 mg/l for Municipals) may be appropriate if deemed more stringent based on dilution and model results.

If permit limits are more stringent than TBELs, describe how limits were developed: N/A

<u>Ammonia and Total Residual Chlorine Limitations</u>

Limitations for ammonia are based on protection of aquatic life utilizing an ammonia chronic criterion of 1.0 mg/l (summer) and 1.8 mg/l (winter). Acute ammonia limits are derived from chronic criteria, utilizing a multiplication factor of 3 for Municipals and a multiplication factor of 5 for Non-Municipals.

Limitations for Total Residual Chlorine (TRC) are based on the NC water quality standard for protection of aquatic life (17 ug/l) and capped at 28 ug/l (acute impacts). Due to analytical issues, all TRC values reported below 50 ug/l are considered compliant with their permit limit.

Describe any proposed changes to ammonia and/or TRC limits for this permit renewal: N/A

<u>Reasonable Potential Analysis (RPA) for Toxicants</u>

If applicable, conduct RPA analysis and complete information below.

The need for toxicant limits is based upon a demonstration of reasonable potential to exceed water quality standards, a statistical evaluation that is conducted during every permit renewal utilizing the most recent effluent data for each outfall. The RPA is conducted in accordance with 40 CFR 122.44 (d) (i). The NC

RPA procedure utilizes the following: 1) 95% Confidence Level/95% Probability; 2) assumption of zero background; 3) use of ½ detection limit for "less than" values; and 4) stream flows used for dilution consideration based on 15A NCAC 2B.0206. Effective April 6, 2016, NC began implementation of dissolved metals criteria in the RPA process in accordance with guidance titled *NPDES Implementation of Instream Dissolved Metals Standards*, dated June 10, 2016.

A reasonable potential analysis was conducted on effluent toxicant data collected between May 2016 and March 2020. Pollutants of concern included toxicants with positive detections and associated water quality standards/criteria. Based on this analysis, the following permitting actions are proposed for this permit:

- Effluent Limit with Monitoring. The following parameters will receive a water quality-based effluent limit (WQBEL) since they demonstrated a reasonable potential to exceed applicable water quality standards/criteria: None
- Monitoring Only. The following parameters will receive a monitor-only requirement since they did not demonstrate reasonable potential to exceed applicable water quality standards/criteria, but the maximum predicted concentration was >50% of the allowable concentration: Lead, Cadmium, and Silver.
- No Limit or Monitoring: The following parameters will not receive a limit or monitoring, since they did not demonstrate reasonable potential to exceed applicable water quality standards/criteria and the maximum predicted concentration was <50% of the allowable concentration: Arsenic, Beryllium, Total Phenolic Compounds, Chromium, Copper, Cyanide, Fluoride, Nickel, Mercury, Molybdenum, Selenium, Zinc, Sulfate, Aluminum, Barium, Chloroform, Antimony, Thallium, and HFPO-DA (WQBEL is not required, TBEL will be used).

Attached are the RPA results and a copy of the guidance entitled "NPDES Implementation of Instream Dissolved Metals Standards – Freshwater Standards."

Toxicity Testing Limitations

Permit limits and monitoring requirements for Whole Effluent Toxicity (WET) have been established in accordance with Division guidance (per WET Memo, 8/2/1999). Per WET guidance, all NPDES permits issued to Major facilities or any facility discharging "complex" wastewater (contains anything other than domestic waste) will contain appropriate WET limits and monitoring requirements, with several exceptions. The State has received prior EPA approval to use an Alternative WET Test Procedure in NPDES permits, using single concentration screening tests, with multiple dilution follow-up upon a test failure.

Describe proposed toxicity test requirement: This is a Major Industrial facility, and a chronic WET limit at 12.5% with quarterly frequency is established in the permit.

Mercury Statewide TMDL Evaluation

There is a statewide TMDL for mercury approved by EPA in 2012. The TMDL target was to comply with EPA's mercury fish tissue criteria (0.3 mg/kg) for human health protection. The TMDL established a wasteload allocation for point sources of 37 kg/year (81 lb/year), and is applicable to municipals and industrial facilities with known mercury discharges. Given the small contribution of mercury from point sources (~2% of total load), the TMDL emphasizes mercury minimization plans (MMPs) for point source control. Municipal facilities > 2 MGD and discharging quantifiable levels of mercury (>1 ng/l) will receive an MMP requirement. Industrials are evaluated on a case-by-case basis, depending if mercury is a pollutant of concern. Effluent limits may also be added if annual average effluent concentrations exceed the WQBEL value (based on the NC WQS of 12 ng/l) and/or if any individual value exceeds a TBEL value of 47 ng/l. *Describe proposed permit actions based on mercury evaluation*: This is a new permit and the Division has no historic data to conduct a comprehensive evaluation. The RPA does not indicate the need for a limit and the effluent demonstrated compliance with the annual average Technology Based Effluent Limit for mercury of 47.0 ng/L. No limit is required.

Other TMDL/Nutrient Management Strategy Considerations

If applicable, describe any other TMDLs/Nutrient Management Strategies and their implementation within this permit: N/A

Other WQBEL Considerations

If applicable, describe any other parameters of concern evaluated for WQBELs:

The Technology Based Effluent Limits were the guiding criteria used to develop permit limitations for HFPO-DA, PFMOAA, and PMPA.

When EPA develops PFAS criteria or the State adopts standards for any of the compounds generated by Chemours, the Division will conduct a reasonable potential analysis and reopen the permit to include the new limits, if they are more stringent than the TBELs.

If applicable, describe any special actions (HQW or ORW) this receiving stream and classification shall comply with in order to protect the designated waterbody: N/A

If applicable, describe any compliance schedules proposed for this permit renewal in accordance with 15A NCAC 2H.0107(c)(2)(B), 40CFR 122.47, and EPA May 2007 Memo: N/A

If applicable, describe any water quality standards variances proposed in accordance with NCGS 143-215.3(e) and 15A NCAC 2B.0226 for this permit renewal: N/A

7. Technology-Based Effluent Limitations (TBELs)

Industrials (if not applicable, delete and skip to next Section)

Describe what this facility produces: This is a surface/groundwater remediation permit for the Chemours facility that produces organic chemicals.

List the federal effluent limitations guideline (ELG) for this facility: N/A

If the ELG is based on production or flow, document how the average production/flow value was calculated: N/A

For ELG limits, document the calculations used to develop TBEL limits: N/A

If any limits are based on best professional judgement (BPJ), describe development: N/A

Document any TBELs that are more stringent than WQBELs:

Document any TBELs that are less stringent than previous permit: N/A

HFPO-DA, PMPA, and PFMOAA were chosen as the three PFAS compounds that would be used to indicate reductions of Total PFAS in the remediated surface water. Therefore, TBELs for HFPO-DA, PFMOAA, and PMPA were calculated while recognizing the Consent Order's requirement that the treatment system removes at least 99% of HFPO-DA and PFMOAA.

The facility provided a Report on Treatment of Groundwater Treatability. The Report demonstrated that the proposed GAC system is able to remove 99% of the total Table 3+ PFAS compounds (as listed in NPDES permit application) present in the wastewater based on current analytical reporting limits and influent concentrations. The GAC system showed that when indicator compounds PFMOAA, PMPA, and HFPO-

DA are removed at the rate of 99%, the Total Table 3+ compounds (as listed in NPDES application) were also removed at the rate of 99% based on current analytical detection levels.

The expected effluent at 99% removal would be as follows (based on the projected average concentration):

Monthly Average Limits/ Daily Maximum Limits:

HFPO-DA = (12.2 µg/L/100%) * 1% = 122 ng/L
PFMOAA = (64.3 µg/L/100%) * 1% = 643 ng/L
PMPA = (13.2 µg/L/100%) * 1% = 132 ng/L

These calculations are based on Chemours data provided in the application.

In addition, and as required by the Consent Order, the treatment system will have to demonstrate 99% removal for HFPO-DA, PFMOAA, and PMPA based on monthly average concentration data.

$$\% \, Removal = \frac{Influent - Effluent}{Influent} * 100$$

Where: Influent = monthly average influent concentration
Effluent = monthly average effluent concentration

This percent removal will be reported monthly with Chemours electronic Discharge Monitoring Report (eDMR) data. The water treatment system effluent concentrations of less than the current reporting limits shall be considered as achieving 99% removal.

It is important to emphasize that the 99% removal requirement is self-tightening because as the influent concentration decreases over time, the enforceable effluent limit will also decrease.

8. Antidegradation Review (New/Expanding Discharge)

The objective of an antidegradation review is to ensure that a new or increased pollutant loading will not degrade water quality. Permitting actions for new or expanding discharges require an antidegradation review in accordance with 15A NCAC 2B.0201. Each applicant for a new/expanding NPDES permit must document an effort to consider non-discharge alternatives per 15A NCAC 2H.0105(c)(2). In all cases, existing instream water uses and the level of water quality necessary to protect the existing use is maintained and protected.

If applicable, describe the results of the antidegradation review, including the Engineering Alternatives Analysis (EAA) and any water quality modeling results: The facility provided an EAA to justify the chosen disposal alternative for this new discharge; the complete EAA document can be found within the application in DWR's Laserfiche files.

The facility reviewed the following available alternatives: Connection to the Existing Publicly Owned Treatment Works (POTW), Wastewater Reuse in the Facility, and Direct Discharge.

Connection to the existing POTW was not available since the nearest Rockfish Creek Water Reclamation Facility refused to accept this wastewater. Reuse is currently not a feasible option, because, including but not limited to, - the Consent Order requires Chemours to accelerated reduction of PFAS contamination in the Cape Fear River and downstream water intakes within a two-year period, and it would be difficult for Chemours to implement this in an accelerated manner. In addition, the facility is already uses Reverse Osmosis (RO) to treat wastewater from HFPO-DA process and Thermal Oxidizer wastewater. The RO effluent is being reused at the facility if it meets the production specifications for Total Organic Carbon.

Furthermore, the flow from Outfall 004 is expected to be around 2.38 MGD, which substantially exceed production needs of all the manufacturing entities that use less than 0.6 MGD.

The Present Value Costs for the next 20 years was calculated for the following alternatives using an EPA discount factor of 3.5%; the Costs are presented below:

Wastewater Reuse in the Facility - $69,600,000
Direct Discharge- $68,200,000

As compared to other alternatives, and in accordance with 15A NCAC 2H .0105(c)(2), the Engineering Alternatives Analysis provided justification for a direct discharge to surface water alternative and indicated that the direct discharge is the most environmentally sound alternative selected from all reasonably cost-effective options.

9. Antibacksliding Review

Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding of effluent limitations in NPDES permits. These provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed (e.g., based on new information, increases in production may warrant less stringent TBEL limits, or WQBELs may be less stringent based on updated RPA or dilution).

Are any effluent limitations less stringent than previous permit (YES/NO): N/A. This is a new permit.

If YES, confirm that antibacksliding provisions are not violated: N/A

10. Monitoring Requirements

Monitoring frequencies for NPDES permitting are established in accordance with the following regulations and guidance: 1) State Regulation for Surface Water Monitoring, 15A NCAC 2B.0500; 2) NPDES Guidance, Monitoring Frequency for Toxic Substances (7/15/2010 Memo); 3) NPDES Guidance, Reduced Monitoring Frequencies for Facilities with Superior Compliance (10/22/2012 Memo); 4) Best Professional Judgement (BPJ). Per US EPA (Interim Guidance, 1996), monitoring requirements are not considered effluent limitations under Section 402(o) of the Clean Water Act, and therefore anti-backsliding prohibitions would not be triggered by reductions in monitoring frequencies.

11. Electronic Reporting Requirements

The US EPA NPDES Electronic Reporting Rule was finalized on December 21, 2015. Effective December 21, 2016, NPDES regulated facilities are required to submit Discharge Monitoring Reports (DMRs) electronically. Effective December 21, 2020, NPDES regulated facilities will be required to submit additional NPDES reports electronically. This permit contains the requirements for electronic reporting, consistent with Federal requirements.

12. Summary of Proposed Permitting Actions

Table A. Current Permit Conditions and Proposed Changes Outfall 004

Parameter	Current Permit	Proposed Change	Basis for Condition/Change

Flow	N/A (new permit)	Monitoring and 2.38 MGD limit added	15A NCAC 2B .0505 Flow limit is based on system design
Total Monthly Flow	N/A (new permit)	Monitoring added	Needed to calculate loading Consent order requirements.
BOD5	N/A (new permit)	30.0 mg/L MA 45.0 mg/L DM	WQBEL. Based on protection of DO standard. 15A NCAC 2B.0200
TSS	N/A (new permit)	30.0 mg/L MA 45.0 mg/L DM	TBEL. Best Professional Judgement.
Temperature	N/A (new permit)	The ambient water temperature to exceed 32°C	WQBEL. State WQ standard, 15A NCAC 2B .0200
DO	N/A (new permit)	Weekly upstream/downstream Monitoring Only	State WQ standard, 15A NCAC 2B .0200
HFPO-DA (GenX)	N/A (new permit)	MA 0.12 µg/L DM 0.12 µg/L and 99% removal	TBEL. No toxics in toxic amounts. 15A NCAC 2B.0200 Consent order requirements. Values are based on system design.
PFMOAA	N/A (new permit)	MA 0.64 µg/L DM 0.64 µg /L and 99% removal	TBEL. No toxics in toxic amounts. 15A NCAC 2B.0200 Consent order requirements. Values are based on system design.
PMPA	N/A (new permit)	MA 0.13 µg/L DM 0.13 µg/L and 99% removal	TBEL. No toxics in toxic amounts. 15A NCAC 2B.0200 Consent order requirements. Values are based on system design.
PFAS compounds (Table 3+ and/or EPA Method 357 mod)	N/A (new permit)	Monitoring added	TBEL. No toxics in toxic amounts. 15A NCAC 2B.0200
pH	N/A (new permit)	6.0 – 9.0 SU	WQBEL. State WQ standard, 15A NCAC 2B .0200
Total Nitrogen	N/A (new permit)	Monthly Effluent Monitoring Only	State WQ Rule, 15A NCAC 2B .0500

Total Phosphorus	N/A (new permit)	Monthly Effluent Monitoring Only	State WQ Rule, 15A NCAC 2B .0500
Conductivity	N/A (new permit)	Monthly upstream/downstream Monitoring Only	State WQ Rule, 15A NCAC 2B .0500
Toxicity Test	N/A (new permit)	Chronic limit, 12.5% effluent	WQBEL. No toxics in toxic amounts. 15A NCAC 2B.0200 and 15A NCAC 2B.0500
Total Hardness	N/A (new permit)	Monitoring added	State WQ standard, 15A NCAC 2B .0200
Total Silver	N/A (new permit)	Quarterly Effluent Monitoring Only	State WQ standard, 15A NCAC 2B .0200 Monitoring is based on RPA
Total Cadmium	N/A (new permit)	Quarterly Effluent Monitoring Only	State WQ standard, 15A NCAC 2B .0200 Monitoring is based on RPA
Total Lead	N/A (new permit	Quarterly Effluent Monitoring Only	State WQ standard, 15A NCAC 2B .0200 Monitoring is based on RPA
Total Thallium	N/A (new permit	Quarterly Effluent Monitoring Only	State WQ standard, 15A NCAC 2B .0200 Monitoring is based on RPA
Electronic Reporting	N/A (new permit)	Required	In accordance with EPA Electronic Reporting Rule 2015.

MGD – Million gallons per day, MA – Monthly Average, WA – Weekly Average, DM – Daily Max

13. Public Notice Schedule

Permit to Public Notice: 05/22/2022

Per 15A NCAC 2H .0109 & .0111, The Division will receive comments for a period of 30 days following the publication date of the public notice. Any request for a public hearing shall be submitted to the Director within the 30 days comment period indicating the interest of the party filing such request and the reasons why a hearing is warranted.

14. NPDES Division Contact

If you have questions regarding any of the above information or on the attached permit, please contact Sergei Chernikov at (919) 707-3606 or via email at sergei.chernikov@ncdenr.gov.

15. Fact Sheet Addendum (if applicable)

Were there any changes made since the Draft Permit was public noticed (Yes/No): Yes
If Yes, list changes and their basis below:

16. Fact Sheet Attachments (if applicable)

- RPA Sheets
- NPDES Implementation of Instream Dissolved Metals Standards
- DMR Parameter Values Export – PFMOAA, PMPA, HFPO-DA

17. Changes in the Final Permit

- The Division is establishing an effluent limit for HFPO-DA of <10.0 ng/L based on the EPA drinking water health advisory of 10 ng/L that was issued on June 15, 2022, which was published after issuance of the draft permit. In addition, based on an evaluation of the data from Outfall 003, after an initial optimization period, effluent concentrations are consistently < 10.0 ng/L.
- Based on an evaluation of the data from Outfall 003 and in accordance with the procedure established in Chapter 5 of USEPA NPDES Permit Writers' Manual the Division is also establishing effluent limits for PMPA and PFMOAA as 10.0 ng/L and <20.0 ng/L, respectively. Please see attached calculations on file labeled DMR Parameter Values Export.
- Limits for all three indicator parameters will take effect after a 6-month optimization period.
- During the optimization period, effluent limits will be 120 ng/L for HFPO-DA, 320 ng/L for PFMOAA, and 100 ng/L for PMPA. These limits are based on best professional judgement.

These changes are summarized in the table below.

Parameter	**Draft Permit**	**Final Permit**	**Basis for Condition/Change**
HFPO-DA (GenX)	MA 0.12 µg/L DM 0.12 µg/L and 99% removal	MA 0.12 µg/L DM 0.12 µg/L and 99% removal After 6 months: MA <0.010 µg/L DM <0.010 µg/L	TBEL. No toxics in toxic amounts. 15A NCAC 2B.0200 Consent order requirements. Values are based on system design. New EPA drinking water health advisory of 10 ng/L.
PFMOAA	MA 0.64 µg/L DM 0.64 µg /L and 99% removal	MA 0.32 µg/L DM 0.32 µg /L and 99% removal After 6 months:	TBEL. No toxics in toxic amounts. 15A NCAC 2B.0200 Consent order requirements. Values are based on system design.

		MA <0.020 µg/L DM <0.020 µg/L	Procedure in Chapter 5 of USEPA NPDES Permit Writers' Manual
PMPA	MA 0.13 µg/L DM 0.13 µg/L and 99% removal	MA 0.10 µg/L DM 0.10 µg/L and 99% removal After 6 months: MA 0.010 µg/L DM 0.010 µg/L	TBEL. No toxics in toxic amounts. 15A NCAC 2B.0200 Consent order requirements. Values are based on system design. Procedure in Chapter 5 of USEPA NPDES Permit Writers' Manual

MGD – Million gallons per day, MA – Monthly Average, WA – Weekly Average, DM – Daily Max

NPDES Implementation of Instream Dissolved Metals Standards – Freshwater Standards

The NC 2007-2015 Water Quality Standard (WQS) Triennial Review was approved by the NC Environmental Management Commission (EMC) on November 13, 2014. The US EPA subsequently approved the WQS revisions on April 6, 2016, with some exceptions. Therefore, metal limits in draft permits out to public notice after April 6, 2016 must be calculated to protect the new standards - as approved.

Table 1. NC Dissolved Metals Water Quality Standards/Aquatic Life Protection

Parameter	Acute FW, µg/l (Dissolved)	Chronic FW, µg/l (Dissolved)	Acute SW, µg/l (Dissolved)	Chronic SW, µg/l (Dissolved)
Arsenic	340	150	69	36
Beryllium	65	6.5	---	---
Cadmium	Calculation	Calculation	40	8.8
Chromium III	Calculation	Calculation	---	---
Chromium VI	16	11	1100	50
Copper	Calculation	Calculation	4.8	3.1
Lead	Calculation	Calculation	210	8.1
Nickel	Calculation	Calculation	74	8.2
Silver	Calculation	0.06	1.9	0.1
Zinc	Calculation	Calculation	90	81

Table 1 Notes:

1. FW= Freshwater, SW= Saltwater
2. Calculation = Hardness dependent standard
3. Only the aquatic life standards listed above are expressed in dissolved form. Aquatic life standards for Mercury and selenium are still expressed as Total Recoverable Metals due to bioaccumulative concerns (as are all human health standards for all metals). It is still necessary to evaluate total recoverable aquatic life and human health standards listed in 15A NCAC 2B.0200 (e.g., arsenic at 10 µg/l for human health protection; cyanide at 5 µg/L and fluoride at 1.8 mg/L for aquatic life protection).

Table 2. Dissolved Freshwater Standards for Hardness-Dependent Metals

The Water Effects Ratio (WER) is equal to one unless determined otherwise under 15A NCAC 02B .0211 Subparagraph (11)(d)

Metal	NC Dissolved Standard, µg/l
Cadmium, Acute	WER*{1.136672-[*ln* hardness](0.041838)} · *e*^{0.9151 [*ln* hardness]-3.1485}
Cadmium, Acute Trout waters	WER*{1.136672-[*ln* hardness](0.041838)} · *e*^{0.9151[*ln* hardness]-3.6236}
Cadmium, Chronic	WER*{1.101672-[*ln* hardness](0.041838)} · *e*^{0.7998[*ln* hardness]-4.4451}
Chromium III, Acute	WER*0.316 · *e*^{0.8190[*ln* hardness]+3.7256}
Chromium III, Chronic	WER*0.860 · *e*^{0.8190[*ln* hardness]+0.6848}
Copper, Acute	WER*0.960 · *e*^{0.9422[*ln* hardness]-1.700}
Copper, Chronic	WER*0.960 · *e*^{0.8545[*ln* hardness]-1.702}
Lead, Acute	WER*{1.46203-[*ln* hardness](0.145712)} · *e*^{1.273[*ln* hardness]-1.460}
Lead, Chronic	WER*{1.46203-[*ln* hardness](0.145712)} · *e*^{1.273[*ln* hardness]-4.705}
Nickel, Acute	WER*0.998 · *e*^{0.8460[*ln* hardness]+2.255}
Nickel, Chronic	WER*0.997 · *e*^{0.8460[*ln* hardness]+0.0584}
Silver, Acute	WER*0.85 · *e*^{1.72[*ln* hardness]-6.59}
Silver, Chronic	Not applicable
Zinc, Acute	WER*0.978 · *e*^{0.8473[*ln* hardness]+0.884}
Zinc, Chronic	WER*0.986 · *e*^{0.8473[*ln* hardness]+0.884}

General Information on the Reasonable Potential Analysis (RPA)

The RPA process itself did not change as the result of the new metals standards. However, application of the dissolved and hardness-dependent standards requires additional consideration in order to establish the numeric standard for each metal of concern of each individual discharge.

The hardness-based standards require some knowledge of the effluent and instream (upstream) hardness and so must be calculated case-by-case for each discharge.

Metals limits must be expressed as 'total recoverable' metals in accordance with 40 CFR 122.45(c). The discharge-specific standards must be converted to the equivalent total values for use in the RPA calculations. We will generally rely on default translator values developed for each metal (more on that below), but it is also possible to consider case-specific translators developed in accordance with established methodology.

RPA Permitting Guidance/WQBELs for Hardness-Dependent Metals - Freshwater

The RPA is designed to predict the maximum likely effluent concentrations for each metal of concern, based on recent effluent data, and calculate the allowable effluent concentrations, based on applicable standards and the critical low-flow values for the receiving stream.

If the maximum predicted value is greater than the maximum allowed value (chronic or acute), the discharge has reasonable potential to exceed the standard, which warrants a permit limit in most cases. If monitoring for a particular pollutant indicates that the pollutant is not present (i.e. consistently below detection level), then the Division may remove the monitoring requirement in the reissued permit.

1. To perform a RPA on the Freshwater hardness-dependent metals the Permit Writer compiles the following information:
    - Critical low flow of the receiving stream, 7Q10 (the spreadsheet automatically calculates the 1Q10 using the formula 1Q10 = 0.843 (s7Q10, cfs) $^{0.993}$
    - Effluent hardness and upstream hardness, site-specific data is preferred
    - Permitted flow
    - Receiving stream classification

2. In order to establish the numeric standard for each hardness-dependent metal of concern and for each individual discharge, the Permit Writer must first determine what effluent and instream (upstream) hardness values to use in the equations.

    The permit writer reviews DMR's, Effluent Pollutant Scans, and Toxicity Test results for any hardness data and contacts the Permittee to see if any additional data is available for instream hardness values, upstream of the discharge.

    If no hardness data is available, the permit writer may choose to do an initial evaluation using a default hardness of 25 mg/L (CaCO3 or (Ca + Mg)). Minimum and maximum limits on the hardness value used for water quality calculations are 25 mg/L and 400 mg/L, respectively.

    If the use of a default hardness value results in a hardness-dependent metal showing reasonable potential, the permit writer contacts the Permittee and requests 5 site-specific effluent and upstream hardness samples over a period of one week. The RPA is rerun using the new data.

    The overall hardness value used in the water quality calculations is calculated as follows:

Combined Hardness (chronic)

$$= \frac{(\text{Permitted Flow, cfs} * \text{Avg. Effluent Hardness, mg/L}) + (\text{s7Q10, cfs} * \text{Avg. Upstream Hardness, mg/L})}{(\text{Permitted Flow, cfs} + \text{s7Q10, cfs})}$$

The Combined Hardness for acute is the same but the calculation uses the 1Q10 flow.

3. The permit writer converts the numeric standard for each metal of concern to a total recoverable metal, using the EPA Default Partition Coefficients (DPCs) or site-specific translators, if any have been developed using federally approved methodology.

> EPA default partition coefficients or the "Fraction Dissolved" converts the value for dissolved metal at laboratory conditions to total recoverable metal at in-stream ambient conditions. This factor is calculated using the linear partition coefficients found in *The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion* (EPA 823-B-96-007, June 1996) and the equation:
>
> $$\frac{C_{diss}}{C_{total}} = \frac{1}{1 + \{ [K_{po}] [ss^{(1+a)}] [10^{-6}] \}}$$
>
> Where:
>
> ss = in-stream suspended solids concentration [mg/l], minimum of 10 mg/L used,

4. The numeric standard for each metal of concern is divided by the default partition coefficient (or site-specific translator) to obtain a Total Recoverable Metal at ambient conditions.

   In some cases, where an EPA default partition coefficient translator does not exist (i.e. silver), the dissolved numeric standard for each metal of concern is divided by the EPA conversion factor to obtain a Total Recoverable Metal at ambient conditions. This method presumes that the metal is dissolved to the same extent as it was during EPA's criteria development for metals. For more information on conversion factors see the June, 1996 EPA Translator Guidance Document.

5. The RPA spreadsheet uses a mass balance equation to determine the total allowable concentration (permit limits) for each pollutant using the following equation:

$$Ca = \frac{(s7Q10 + Qw)(Cwqs) - (s7Q10)(Cb)}{Qw}$$

Where: Ca = allowable effluent concentration (µg/L or mg/L)

Cwqs = NC Water Quality Standard or federal criteria (µg/L or mg/L)

Cb = background concentration: assume zero for all toxicants except NH_3* (µg/L or mg/L)

Qw = permitted effluent flow (cfs, match s7Q10)

s7Q10 = summer low flow used to protect aquatic life from chronic toxicity and human health through the consumption of water, fish, and shellfish from noncarcinogens (cfs)

* Discussions are on-going with EPA on how best to address background concentrations

Flows other than s7Q10 may be incorporated as applicable:

1Q10 = used in the equation to protect aquatic life from acute toxicity

QA = used in the equation to protect human health through the consumption of water, fish, and shellfish from carcinogens

30Q2 = used in the equation to protect aesthetic quality

6. The permit writer enters the most recent 2-3 years of effluent data for each pollutant of concern. Data entered must have been taken within four and one-half years prior to the date of the permit application (40 CFR 122.21). The RPA spreadsheet estimates the 95th percentile upper concentration of each pollutant. The Predicted Max concentrations are compared to the Total allowable concentrations to determine if a permit limit is necessary. If the predicted max exceeds the acute or chronic Total allowable concentrations, the discharge is considered to show reasonable potential to violate the water quality standard, and a permit limit (Total allowable concentration) is included in the permit **in accordance with the U.S. EPA Technical Support Document for Water Quality-Based Toxics Control published in 1991.**

7. When appropriate, permit writers develop facility specific compliance schedules in accordance with the EPA Headquarters Memo dated May 10, 2007 from James Hanlon to Alexis Strauss on 40 CFR 122.47 Compliance Schedule Requirements.

8. The Total Chromium NC WQS was removed and replaced with trivalent chromium and hexavalent chromium Water Quality Standards. As a cost savings measure, total chromium data results may be used as a conservative surrogate in cases where there are no analytical results based on chromium III or VI. In these cases, the projected maximum concentration (95th %) for total chromium will be compared against water quality standards for chromium III and chromium VI.

9. Effluent hardness sampling and instream hardness sampling, upstream of the discharge, are inserted into all permits with facilities monitoring for hardness-dependent metals to ensure the accuracy of the permit limits and to build a more robust hardness dataset.

10. Hardness and flow values used in the Reasonable Potential Analysis for this permit included:

Parameter	**Value**	**Comments (Data Source)**
Average Effluent Hardness (mg/L) [Total as, $CaCO_3$ or (Ca+Mg)]	25.0	Default value
Average Upstream Hardness (mg/L) [Total as, $CaCO_3$ or (Ca+Mg)]	25.0	Default value
7Q10 summer (cfs)	0	Lake or Tidal
1Q10 (cfs)	0	Lake or Tidal
Permitted Flow (MGD)	2.1	For dewatering

DMR Parameter Values Export – PFMOAA 1/4/2021 through 5/3/2022 n =92

52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0039
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0022
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.004
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0047
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0024
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0029
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.004
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0032
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0024
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0061
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0032
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0043
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0064
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0025
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0025
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0031
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0053
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0028
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.0025
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN

52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ng/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN

52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN

52613 - Perfluoro-2-methoxyacetic acid (PFMOAA) Grab ug/l 0.002 LESSTHAN
99th percentile 0.006127
Mean (daily) 0.00233
Daily variability factor 2.629123
Daily Maximum 0.006127 Rounded to 0.02 in the permit.
due to the high variability
factor

DMR Parameter Values Export – PMPA Jan. 2021 through May 2022 n=82
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN

52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN

52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
52624 - Perfluoro-2-methoxypropanoic acid (PMPA) Grab ug/l 0.01 LESSTHAN
99th percentile 0.01
Mean (daily) 0.01
Daily variability factor 1
Daily Maximum 0.01
95th percentile 0.01
Monthly variability factor 1
Monthly Average 0.01

DMR Parameter Values Export - HFPO-DA Jan. 2021 through May 2022 n=103

52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.025	
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.0021	
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.0021	
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN

52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.0022	
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.0023	
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.0023	
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN

52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN

52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN
52612 - Hexafluoropropylene oxide dimer acid (HFPO-DA / PFPrOPrA / GenX)	Grab	ug/l	0.002	LESSTHAN

99th percentile	0.0023
Mean (daily)	0.00223301
Daily variability factor	1.03
Daily Maximum	0.0023