STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

TECHNICAL REPORTING ORDER R2-2025-0005 FOR THE DETERMINATION OF THE PRESENCE OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) AT SELECTED LANDFILLS (WAT. CODE, § 13267)

Pursuant to Water Code section 13267, owners and operators (collectively, Dischargers) of the facilities listed in **Attachment 1** (Subject Facilities), which are believed to have accepted, stored, and/or used materials that may contain per- and polyfluoroalkyl substances (PFAS), are required to submit information as described below, and also in **Attachment 2**.

As the recipient of this Order, failure to comply with this Order may subject you to civil liability of up to $5,000 per day for each day in which the violation occurs.

I. BACKGROUND

A. WHAT ARE PFAS?

PFAS are a family of more than 3,000 man-made and mostly unregulated chemicals that have been produced since the mid-1900s. They are mobile, persistent, bioaccumulative, and may cause or are suspected of causing adverse health effects. They are resistant to degradation in the environment and when degradation occurs, it typically results in the formation of other PFAS compounds. The PFAS compounds have a wide range of physical and chemical properties but may be grouped into several chemical classes based on key functional groups. Currently, the key subgroups of concern are perfluoroalkane sulfonic acids such as the long-chain perfluorooctane sulfonate (PFOS) and perfluoroalkyl carboxylic acids such as perfluorooctanoic acid (PFOA).

PFAS are extremely persistent in the environment and highly mobile in water. People can be exposed to PFAS through food, food packaging, consumer products, house dust, and drinking water. Since these chemicals have been used in an array of consumer products, scientists have found PFOA and PFOS in the blood of nearly all people tested. Exposure through drinking water has become an increasing concern due to the tendency of PFAS to accumulate in groundwater.

Based on the current available peer-reviewed studies on laboratory animals and epidemiological evidence in human populations, the United States Environmental Protection Agency (USEPA) released the following statement:

> These studies indicate that exposure to PFOA and PFOS over certain levels may result in adverse health effects, including developmental effects to fetuses during pregnancy or to breastfed

infants (e.g., low birth weight, accelerated puberty, skeletal variations), cancer (e.g., testicular, kidney), liver effects (e.g., tissue damage), immune effects (e.g., antibody production and immunity), thyroid effects and other effects (e.g., cholesterol changes).[1]

Potential locations of fire-fighting sources of PFAS include bulk fuel storage terminals and refineries, airports and aviation facilities, military bases and training centers, and petrochemical production facilities. Non-industrial PFAS sources include waste disposal facilities, wastewater treatment plant operations, and biosolids application to agriculture. Secondary sources of PFAS include waste streams such as landfills and wastewater treatment plants. More information on PFAS chemicals can be found at USEPA's website (https://www.epa.gov/pfas).

USEPA evaluated analytical data from over 200 non-hazardous solid waste landfills across the US to understand the presence of PFAS in landfill leachate. USEPA reported that PFAS is present in landfill leachate at over 95 percent of the landfills with data.[2] Additionally, data collected as part of the State Water Resources Control Board (State Water Board) Order WQ 2019-0006-DWQ issued March 20, 2019, to nearly 200 active municipal solid waste landfills (MSWLFs) in California also supported the predominance of PFAS reported in leachate and groundwater. This Order extends PFAS investigation requirements to the Subject Facilities, which were not previously required to conduct PFAS investigations under State Water Board Order WQ 2019-0006-DWQ.

B. WHICH PFAS ARE OF INTEREST?

The State Water Board and Regional Water Boards (collectively, Water Boards) are interested in all PFAS that exist in the environment. Due to analytical limitations, the focus of this Order is on PFAS analytes listed in **Attachment 2**. The PFAS analyte list is not exhaustive but is intended to serve as a minimum requirement for sampling pursuant to this Order. Some laboratories may be capable of analyzing additional PFAS that are not included in **Table 1** of this Order. Analyzing and reporting PFAS not included in **Table 1** are encouraged.

C. WHY IS THIS ACTIVITY REQUIRED?

The Water Boards are charged with the protection of the beneficial uses of water in California, including water used or that could potentially be used as drinking water. If materials suspected of containing PFAS were used, released, or

[1] USEPA Technical Note (https://www.epa.gov/sites/production/files/2017-12/documents/ffrrofactsheet_contaminants_pfos_pfoa_11-20-17_508_0.pdf) for more information.

[2] https://www.epa.gov/system/files/documents/2023-01/11143_ELG%20Plan%2015_508.pdf#page=48

disposed at your facility, technical reports are required to investigate the presence of PFAS.

The activities included in this Order are part of a statewide effort to evaluate PFAS impacts and to obtain a preliminary understanding of PFAS concentrations at facilities. The Water Boards have previously directed and intend to direct other dischargers identified as potential PFAS sources in the state to perform PFAS testing. The Water Boards will evaluate the data collected to make informed decisions in implementing appropriate regulatory action, in anticipation of emerging regulatory standards for PFAS.

The State Water Board, Division of Drinking Water (DDW) established the following notification and response levels for PFOA, PFOS, PFBS and PFHxS:

Notification levels

- PFOA at 5.1 parts per trillion (ppt),
- PFOS at 6.5 ppt,
- PFHxS at 3 ppt, and
- PFBS at 0.5 parts per billion (ppb).

Response Levels

- PFOA at 10 ppt based on a quarterly running annual average,
- PFOS at 40 ppt based on a quarterly running annual average,
- PFHxS at 20 ppt based on a one-time result, and
- PFBS at 5 ppb based on a one-time result.

More information on notification levels for PFAS compounds can be found on the Division of Drinking Water Notification and Response Levels webpage (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/NotificationLevels.html).

Additionally, in April 2024, USEPA established National Primary Drinking Water Regulation (NPDWR) Maximum Contaminant Levels (MCLs) for PFOA, PFOS, PFHxS, PFNA, HFPO-DA, and mixtures of two or more of PFHxS, PFNA, HFPO-DA, and PFBS, which became effective on June 25, 2024.[3] These MCLs are legally enforceable levels for drinking water. Initial monitoring for PFAS at public water systems must be completed by 2027. Ongoing compliance monitoring will occur after the initial monitoring period along with notifying the public of the PFAS levels in their drinking water. Public water systems have until 2029 to comply with these MCLs.

[3] https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas

Per Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. Although section 106.3 does not apply to permits and investigative orders, this Order nevertheless promotes that policy by directing source investigations to determine the presence of PFAS in and near waters of the state.

I. WATER CODE SECTION 13267 ORDER FOR TECHNICAL REPORTS

Water Code section 13267, subdivision (b)(1) authorizes the Regional Water Board to require dischargers to submit technical and monitoring program reports under penalty of perjury, provided that the costs and other burden of submitting such reports is reasonable relative to the need for their submittal.[4]

The release of PFAS into the environment or the disposal of waste containing PFAS constitutes a discharge of waste as specified in Water Code section 13050, subdivision (d) and Water Code section 13267, subdivision (b)(1); and a discharge of pollutants as specified in Water Code section 13373. Attachment 3 provides additional information about Water Code Section 13267 requirements.

II. COST AND BENEFIT OF TECHNICAL REPORTS

As described further in this Order and in **Attachment 2**, the recipients of this Order have the potential to release PFAS into the environment, which the USEPA has determined may cause adverse health and ecological effects.

The cost of sampling, analysis, and preparing the reports required by this Order is estimated to be in the range of $10,000 to $45,000.[5] This cost is reasonable relative to the benefit to be gained because, in terms of public health and environmental harm, contamination of groundwater and surface water must be identified before corrective action can be taken, if appropriate.

III. CALIFORNIA ENVIRONMENTAL QUALITY ACT

This Order is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), in

[4] The Regional Water Board is further required to provide the [party subject to the order] with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports." (Wat. Code, § 13267, subd. (b)(1).)

[5] This estimate is based on research and best professional judgement. The estimated cost range does not establish minimum or maximum costs for reports required by this order. You are required to submit work plans and actual costs associated with the reports will vary based on the specifics of the work plans. Site-specific factors (e.g., existing or new wells, sampling personnel, tools, and equipment) may also impact actual costs.

accordance with sections 15304 and 15308 of the CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.).

IV. PENALTIES

Water Code section 13268 provides that failure to submit the required information by the specified compliance date, or falsifying any information provided therein, is a misdemeanor and may result in civil liability. Noncompliance may subject you to civil liability in the amount of up to $5,000 for each day of violation. Please be advised that compliance with this Order is not a substitute for compliance with other applicable laws.

V. REQUIRED ACTIONS

Based on the foregoing considerations, the owners and operators (Dischargers) of the facilities listed in **Attachment 1** (Subject Facilities) are hereby required to comply with the investigative and reporting requirements specified in **Attachment 2**.

So ordered.

Eileen M. White

Eileen M. White, P.E.
Executive Officer

ATTACHMENTS:

Attachment 1 – List of Subject Facilities
Attachment 2 – Technical Report Requirements for Landfills
Attachment 3 – Water Code Section 13267 Fact Sheet

ATTACHMENT 1 – LIST OF FACILITIES SUBJECT TO THE ORDER

Facility Name	Discharger	Facility Address	City	County	GeoTracker Global ID
American Canyon Landfill	Napa-Vallejo Waste Management Authority	Eucalyptus Drive at Napa Junction	Vallejo	Solano	L10009320546
Berkeley Landfill (Cesar Chavez Park)	City of Berkeley	11 Spinnaker Way	Berkeley	Alameda	L10006224883
Davis Street Landfill / Oyster Bay	Waste Management, Inc.	West End of Davis St	San Leandro	Alameda	L10006490369
Hillside / Colma Landfill	Cypress-Amloc Land Company	Hillside Blvd	Colma	San Mateo	L10008912226
Oyster Point Landfill	City of South San Francisco	Oyster Point Blvd	South San Francisco	San Mateo	L10009323371
Shoreline Landfill	City of Mountain View	End of Shoreline Blvd	Mountain View	Santa Clara	L10009561125
Sierra Point Landfill	Sierra Point Environmental Management Association	1000 Marina	Brisbane	San Mateo	L10009492010
Singleton Road	City of San Jose	Singleton Road	San Jose	Santa Clara	L10002204015
Sunnyvale Landfill	City of Sunnyvale	Caribbean Drive	Sunnyvale	Santa Clara	L10003423381
Tri-Cities Landfill	Waste Management, Inc.	7010 Automall Parkway	Fremont	Alameda	L10001297618
Turk Island Landfill	Turk Island Company	32505 Union City Blvd	Union City	Alameda	L10006051080

Facility Name	Discharger	Facility Address	City	County	GeoTracker Global ID
Westport Landfill	Westport Office Park, LLC	1300 Island Dr	Redwood City	San Mateo	L10003734871

ATTACHMENT 2 – TECHNICAL REPORT REQUIREMENTS FOR LANDFILLS

I. JUSTIFICATION FOR THE NEED FOR TECHNICAL REPORTS

Studies being conducted across the state and nation are linking consumer and industrial use of PFAS-containing materials to elevated concentrations of PFAS detected in landfill leachate, gas condensate, and groundwater monitoring systems.

In 2019, the State Water Board issued Order WQ 2019-0006-DWQ, which required nearly 200 landfills to conduct a one-time sampling event for the presence of PFAS in groundwater and leachate. Statewide landfill sampling results indicated average PFAS concentrations in groundwater ranged from non-detect (or at or below the laboratory reporting limit) to over 9,000 ppt. 60 percent of landfills reported a concentration that exceeded at least one of the five PFAS MCLs for PFOA, PFOS, PFHxS, PFNA, or HFPO-DA. Maximum PFAS concentrations in groundwater ranged from <1 ppt to 64,000 ppt across the state. Leachate sampling results indicated the presence of PFAS in 98 percent of the landfills with concentrations that exceeded at least one of the five PFAS MCLs. Maximum PFAS concentrations in leachate ranged from <1 ppt to 69,000 ppt.

PFAS testing was performed on leachate and groundwater at 27 MSWLFs within the San Francisco Bay Region (i.e., 10 active and 17 closed). PFAS concentrations in groundwater were reported in 85 percent of the MSWLFs with concentrations that exceeded at least one of the five PFAS MCLs. Maximum PFAS concentrations in groundwater ranged from 3 ppt to 2,000 ppt. Leachate sampling results indicated the presence of PFAS in nearly 100 percent of the MSWLFs tested with concentrations that exceeded at least one of the five PFAS MCLs. Maximum PFAS concentrations in leachate ranged from <1 ppt to 15,000 ppt.

Landfill PFAS analytical data from previous investigations are available for public review and download through the State Water Board's interactive PFAS Map (https://geotracker.waterboards.ca.gov/map/pfas_map), as well as through GeoTracker, the State Water Board's data management system for sites that impact, or have the potential to impact, water quality (https://geotracker.waterboards.ca.gov/).

Literature reviews also provide an indication of potential PFAS levels in landfill gas condensate and stormwater. Chen et al (2023)[6] evaluated 281 waste disposal facilities in Florida to identify PFAS levels in leachate, gas condensate, stormwater, and groundwater from various different types of landfills containing MSW-derived leachate, construction and demolition debris (CDD) leachate, and MSW incineration

[6] Chen et al. 2023. Evaluation of per- and polyfluoroalkyl substances (PFAS) in leachate, gas condensate, stormwater and groundwater at landfills. Chemosphere, Volume 318, March 2023, 137903. https://doi.org/10.1016/j.chemosphere.2023.137903.

ash (MSWI ash). Median concentrations reported PFAS levels in leachate ranged from 1,300 ng/L (MSWI ash leachate) to 6,200 ng L/ (CDD leachate) to 10,000 ng/L (MSW leachate). Median PFAS levels in gas condensate (7,000 ng/) were like MSW leachate levels. PFAS median concentrations were lower in stormwater and groundwater (less than 500 ng/L).

Based on the above results, it is reasonable to conclude that MSWLFs have a high probability of having PFAS containing waste materials which will concentrate PFAS analytes within landfill leachate, as well as pose a potential risk to groundwater and surface water. Therefore, a work plan is required for the preliminary investigation of groundwater, leachate, gas condensate, and stormwater (see **Section II.A** below). The Regional Water Board seeks to determine whether the groundwater, leachate, gas condensate and/or surface water (stormwater) at the location of the Subject Facility is impacted by PFAS and obtain a preliminary understanding of PFAS concentrations at the Subject Facility.

II. PRELIMINARY SITE INVESTIGATION AND TECHNICAL REPORT REQUIREMENTS

A. Preliminary Site Investigation Work Plan

Within 60 days of the date of this Order, the Dischargers shall submit, for Executive Officer approval, a work plan for a preliminary site investigation of PFAS impacts where it was used, stored, disposed, discharged, spilled, or released in any way to groundwater, leachate, gas condensate, and/or stormwater at your facility.[7] The Executive Officer may approve the work plan subject to revisions that are deemed necessary to achieve the investigative objectives outlined above.

Regional Water Board staff will review and comment on the submitted work plan to assure that the plan is complete and to verify that the proposed sample locations (and well construction design and placement, if necessary) in relation to the potential source areas are appropriate.

Where the Subject Facility is already subject to an existing and active Monitoring and Reporting Program (MRP), sampling activities shall be conducted concurrently with the next quarterly or semiannual monitoring events.

[7] See Section II.C for electronic submittal requirements.

At a minimum, the work plan shall include the following information:

1. Potential and known waste management units (WMUs) where PFAS-containing waste material is either documented or suspected of being disposed.

2. Sensitive receptors such as municipal supply wells, domestic wells, and/or surface water bodies within a one-mile radius of any suspected or known release areas.

3. Proposed sampling locations for groundwater, leachate, gas condensate and/or stormwater. If the sampling locations are known to have or suspected to be constructed with materials containing PFAS compounds, include description of the materials.

    a) Groundwater Sampling: Existing groundwater monitoring wells shall be utilized to collect hydrogeologically upgradient and downgradient samples to the waste management units so that representative groundwater samples can be collected. Sampling of groundwater wells may confirm the presence or absence of such highly mobile PFAS plumes.

    At a minimum, three groundwater sample locations shall be sampled per source area: one hydrogeologically upgradient location and two downgradient locations. These samples may be collected concurrently with regularly scheduled groundwater sampling events.

    b) Leachate Sampling (if applicable): For WMUs with an existing leachate monitoring program approved by the Regional Water Board, leachate samples shall be collected at all accessible locations concurrently with the regularly scheduled sampling events.

    c) Gas Condensate Sampling: Landfill gas condensate shall be collected from appropriate sources (i.e., gas condensate sumps, holding tanks, discharge lines, etc.).

    d) Stormwater Sampling: Stormwater samples shall be collected within four hours of the start of discharge from a rain event. Samples shall be representative of the quality of stormwater associated with the facility's operations. These samples may be collected concurrently with regularly scheduled stormwater sampling events, if applicable.

4. A site map showing the following:

    a) the facility boundary;

    b) proposed sampling locations for the collection of samples for PFAS analysis as described in **Section II.A.3** above. It is not necessary to

sample all locations, but selected locations must appropriately represent all conditions at your facility and must include groundwater, leachate (if applicable), gas condensate, and stormwater;

c) locations of sensitive receptors such as municipal supply wells, domestic wells, and/or surface water bodies within a one-mile radius of any suspected or known release areas; and

d) legend, compass rose, scale, and/or other information necessary to ensure the map is clear and understandable.

The required information may be provided on multiple site maps.

5. Sampling and Analysis Plan for compounds and parameters specified in **Tables 1 and 2** that includes reporting limits and method detection limits. Specify the quality assurance/quality control procedures necessary to ensure that valid and representative data are obtained and reported. Specify the appropriate sampling procedures, including sampling equipment, sampling containers, the quality of water used for blank preparation and equipment decontamination, sample holding times, and quantities for sampling PFAS compounds. To minimize contamination, all sampling materials, equipment, blanks, containers, and equipment decontamination reagents must be PFAS-free, to the maximum extent practicable. Additional guidance for preventing sample contamination can be found on the State Water Board PFAS informational website (www.waterboards.ca.gov/water_issues/programs/pfas).

B. Preliminary Site Investigation and Final Report

Perform an investigation and submit a final report in accordance with the details and schedule in the approved work plan.

At a minimum, the final report shall include the following:

1. A description of the sampling activities and laboratory analysis performed and any deviations to the sampling and analysis program from what was provided in the approved work plan;

2. A written summary of the analytical results;

3. A summary table of the analytical results (including QA/QC samples);

4. A copy of the Chain-of-Custody forms;

5. A copy of the field sampling logs;

6. A copy of temporary/permanent monitoring well construction details, survey data for permanent monitoring wells, and location data for other sampling points (not required if previously provided to the Regional Water Board);

7. A copy of the site map showing the sampling/monitoring locations; and

8. A copy of laboratory certified analytical results.

C. Report and Electronic Laboratory Data Submittal Requirements

1. All documentation (including but not limited to the work plan, final report, sample locations, and analytical reports) must be uploaded into GeoTracker via the ESI Portal. (Cal. Code Regs., tit. 23, § 3890 et seq.). The work plan and final report must be submitted in a searchable portable document format (PDF) with transmittal letter, text, tables, figures, laboratory analytical data, and appendices (one PDF for the entire report) as well as in electronic data deliverable (EDD) format.

   GeoTracker ESI guidance, general information, and Help Desk assistance can be found on the ESI homepage (www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal). Step by step instructions are provided in the ESI Guide for responsible parties under the “Getting Started” section of this webpage.

   The EDD requirement includes all analytical data, sample coordinate locations for surface soil, soil borings, influent and effluent, groundwater, stormwater, and monitoring well information (e.g. latitudes, longitudes, elevations, and depth to water, well construction information, site maps, and boring logs).

2. Per Water Code section 13267, subdivision (b)(1), all reports submitted under this Order shall be accompanied by the following certification, signed under penalty of perjury:

   > I, [NAME], certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision, and the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant civil penalties for submitting false information.

D. Analytical Laboratory Requirements

The analytical laboratory must be accredited by the California Environmental Laboratory Accreditation Program (ELAP) to perform the method compliant with

EPA Method 1633.[8] The laboratory must be capable of quantifying the target PFAS analytes listed in **Table 1**. A list of laboratories that are accredited by ELAP by analytical method can be found on the State Water Board PFAS webpage (https://www.waterboards.ca.gov/pfas/). For the general parameters listed in **Table 2**, the method of analysis shall be appropriate for the expected concentrations.

E. Licensed Professional Oversight

All technical reports[9] submitted under this Order shall be prepared by, or under the direct supervision of a professional geologist, registered certified specialty geologist, or licensed civil engineer (Qualified Professional). (See Wat. Code, § 13373; Bus. & Prof. Code, §§ 6735(a), 7835.) The Qualified Professional's signature, stamp, and contact information shall be present in the work plan and investigation report.

F. Extensions

Any requests for extensions must be submitted to the Regional Water Board's Executive Officer for written approval.

[8] https://www.epa.gov/system/files/documents/2024-12/method-1633a-december-5-2024-508-compliant.pdf

[9] For purposes of this Order, a "technical report" is a report incorporating the application of scientific or engineering principles.

Table 1. Target Reporting Limits[1,2] for LC-MS/MS Analysis of Per- and Polyfluoroalkyl Substances (PFAS) by EPA Method 1633

Chemical Name/ Abbreviation(s)	GeoTracker PARLABEL	Chemical Abstracts Service (CAS) No.	Aqueous: Non-Drinking Water (ng/L)
Perfluoroalkyl carboxylic acids (12)			
Perfluorobutanoic acid (PFBA)	PFBTA	375-22-4	8.0
Perfluoropentanoiic acid (PFPeA)	PFPA	2706-90-3	4.0
Perfluorohexanoic acid (PFHxA)	PFHA	307-24-4	2.0
Perfluoroheptanoic acid (PFHpA)	PFHPA	375-85-9	2.0
Perfluorooctanoic acid (PFOA)	PFOA	335-67-1	2.0
Perfluorononanoic acid (PFNA)	PFNA	375-95-1	2.0
Perfluorodecanoic acid (PFDA)	PFNDCA	335-76-2	2.0
Perfluoroundecanoic acid (PFUnDA, PFUda, PFUnA)	PFUNDCA	2058-94-8	2.0
Perfluorododecanoic acid (PFDoDA, PFDoA)	PFDOA	307-55-1	2.0
Perfluorotridecanoic acid (PFTrDA)	PFTRIDA	72629-94-8	2.0
Perfluorotetradecanoic acid (PFTeDA, PFTA)	PFTEDA	376-06-7	2.0

Chemical Name/ Abbreviation(s)	GeoTracker PARLABEL	Chemical Abstracts Service (CAS) No.	Aqueous: Non-Drinking Water (ng/L)
Perfluoroalkyl sulfonic acids (8)			
Perfluorobutane sulfonic acid (PFBS)	PFBSA	375-73-5	2.0
Perfluoropentane sulfonoic acid (PFPeS)	PFPES	2706-91-4	2.0
Perfluorohexane sulfonic acid (PFHxS)	PFHXSA	355-46-4	2.0
Perfluoroheptane sulfonic acid (PFHpS)	PFHPSA	375-92-8	2.0
Perfluorooctane sulfonic acid (PFOS)	PFOS	1763-23-1	2.0
Perfluorononane sulfonic acid (PFNS)	PFNS	68259-12-1	2.0
Perfluorodecane sulfonic acid (PFDS)	PFDSA	335-77-3	2.0
Perfluorododecanesulfonic acid (PFDoS)	PFDOS	79780-39-5	2.0
Fluorotelomer sulfonic acids (3)			
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	4:2FTS	757124-72-4	8.0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	6:2FTS	27619-97-2	10
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	8:2FTS	39108-34-4	10
Perfluorooctane sulfonamides (3)			
Perfluorooctanesulfonamide (PFOSA, PFOSAm, FOSA)	PFOSA	754-91-6	5.4
N-Methyl perfluorooctane sulfonamide (MeFOSA, MeFOSAm)	MEFOSA	31506-32-8	2.7
N-Ethyl perfluorooctane sulfonamide (EtFOSA, EtFOSAm)	ETFOSA	4151-50-2	2.7
Perfluorooctane sulfonamidoacetic acids (2)			
N-Methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	NMEFOSAA	2355-31-9	2.0
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	NETFOSAA	2991-50-6	2.0

Chemical Name/ Abbreviation(s)	GeoTracker PARLABEL	Chemical Abstracts Service (CAS) No.	Aqueous: Non-Drinking Water (ng/L)
Perfluorooctane sulfonamide ethanols (2)			
N-Methyl perfluorooctane sulfonamide ethanol (MeFOSE)	MEFOSE	24448-09-7	20
N-Ethyl perfluorooctane sulfonamide ethanol (EtFOSE)	ETFOSE	1691-99-2	20
Per- and Polyfluoroether carboxylic acids (5)			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	HFPA-DA	13252-13-6	8.0
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ADONA	919005-14-4	8.0
Perfluoro-3-methoxypropanoic acid (PFMPA)	PFMPA	377-73-1	4.0
Perfluoro-4-methoxybutanoic acid (PFMBA)	PFMBA	863090-89-5	4.0
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NFDHA	151772-58-6	4.0
Ether sulfonic acids (3)			
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	9ClPF3ONS	756426-58-1	9.2
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	11ClPF3OUdS	763051-92-9	9.2
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	PFEESA	113507-82-7	4.0
Fluorotelomer carboxylic acids (3)			
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	3:3FTCA	356-02-5	15
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	5:3FTCA	914637-49-3	50
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	7:3FTCA	812-70-4	50

Abbreviations:

ng/L = nanogram per liter

Notes:

- The laboratory must use data qualifiers when necessary. These data qualifiers must be included in the analytical electronic data format (EDF) submittal into GeoTracker. Refer to GeoTracker's data dictionary for the valid values for data qualifiers. A quick search option for data qualifiers (EDF/LNOTE), and other fields within the EDF submittal is available here.
- Analytical results will be reported down to the laboratory's method detection limit into GeoTracker. Reporting estimated values (values between the reporting limit and the MDL) is provided in GeoTracker EDF Guidance Letter Number 002 *Reporting of Estimated Results in EDF* (https://geotracker.waterboards.ca.gov/regulators/library/5878544449/EDF_Letter_No._002_rev3_2023-08-11.pdf).
    1. These are the target reporting limits for any California Water Board data and represent the highest reporting limits acceptable without qualification for reporting purposes. If a laboratory's reporting limit is lower than the target reporting limits listed, then the laboratory should report data using the laboratory's reporting limit.
    2. The target reporting limits for landfill leachates and biosolids may be unreasonable due to the matrix effects and the potential need for smaller sample sizes. Therefore, the California Water Board expects reporting limits for leachates and biosolids may be higher than for other aqueous samples and solid samples. Laboratories analyzing leachates and/or biosolids must determine limits of quantification for those matrices.

Table 2. Field Parameters and General Chemistry for Groundwater

Parameter	Units
Field Parameters	
Depth to Groundwater	Feet, bgs
Temperature	Degrees C
Electrical Conductivity	µmhos/cm
pH	units
Turbidity	NTU
General Chemistry	
Total Dissolved Solids	mg/L
Chloride	mg/L
Carbonate	mg/L
Bicarbonate	mg/L
Nitrate-Nitrogen	mg/L
Sulfate	mg/L
Calcium	mg/L
Magnesium	mg/L
Potassium	mg/L
Sodium	mg/L
Notes: bgs – below ground surface C – Celsius mg/L – milligrams per liter NTU – nephelometric turbidity units µmhos/cm – micromhos per centimeter	

San Francisco Bay Regional Water Quality Control Board

Fact Sheet – Requirements for Submitting Technical Reports Under Section 13267 of the California Water Code

What does it mean when the Regional Water Board requires a technical report?

Section 13267[1] of the California Water Code provides that "…the regional board may require that any person who has discharged, discharges, or who is suspected of having discharged or discharging, or who proposes to discharge waste...that could affect the quality of waters...shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires."

This requirement for a technical report seems to mean that I am guilty of something, or at least responsible for cleaning something up. What if that is not so?

The requirement for a technical report is a tool the Regional Water Board uses to investigate water quality issues or problems. The information provided can be used by the Regional Water Board to clarify whether a given party has responsibility.

Are there limits to what the Regional Water Board can ask for?

Yes. The information required must relate to an actual or suspected or proposed discharge of waste (including discharges of waste where the initial discharge occurred many years ago), and the burden of compliance must bear a reasonable relationship to the need for the report and the benefits obtained. The Regional Water Board is required to explain the reasons for its requirement.

What if I can provide the information, but not by the date specified?

A time extension may be given for good cause. Your request should be promptly submitted in writing, giving reasons.

Are there penalties if I don't comply?

Depending on the situation, the Regional Water Board can impose a fine of up to $5,000 per day, and a court can impose fines of up to $25,000 per day as well as criminal penalties. A person who submits false information or fails to comply with a requirement to submit a technical report may be found guilty of a misdemeanor. For some reports, submission of false information may be a felony.

Do I have to use a consultant or attorney to comply?

There is no legal requirement for this, but as a practical matter, in most cases the specialized nature of the information required makes use of a consultant and/or attorney advisable.

What if I disagree with the 13267 requirements and the Regional Water Board staff will not change the requirement and/or date to comply?

You may ask that the Regional Water Board reconsider the requirement, and/or submit a petition to the State Water Resources Control Board. See California Water Code sections 13320 and 13321 for details. A request for reconsideration to the Regional Water Board does not affect the 30-day deadline within which to file a petition to the State Water Resources Control Board.

If I have more questions, whom do I ask?

Requirements for technical reports include the name, telephone number, and email address of the Regional Water Board staff contact.

[1] Code sections can be found by searching the California Legislative Code Section search at http://leginfo.legislature.ca.gov/faces/codes.xhtml

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