
State Water Resources Control Board

WATER CODE SECTIONS 13267 AND 13383 ORDER FOR THE DETERMINATION OF THE PRESENCE OF PER- AND POLYFLUOROALKYL SUBSTANCES AT BULK FUEL STORAGE TERMINALS AND REFINERIES

ORDER WQ 2021-0006-DWQ

Pursuant to Water Code sections 13267 and 13383, the State Water Resources Control Board (State Water Board) requires you to submit information as described below. Failure to comply with this Order may subject you to civil liability of up to \$25,000 per day for each day in which the violation occurs.

Your site is identified in **Attachment 1** as a facility that has stored and/or used materials that may contain per- and polyfluoroalkyl substances (PFAS). Therefore, you are required to submit the information detailed in **Attachment 2** to the appropriate Regional Water Quality Control Board (Regional Water Board) identified in the cover letter.

This Order requires completion of the following tasks:

1. Submit/upload a one-time preliminary site investigation work plan to GeoTracker Electronic Submittal of Information (ESI) Portal¹ for review and approval² by the appropriate Regional Water Board that:
 - a) identifies the PFAS-containing materials in your facility;
 - b) identifies the areas where PFAS-containing materials are stored, used, and/or disposed;
 - c) details the various potential pathways (current and historic) for discharge of PFAS from your facility and the nature of potential PFAS contamination in the surface and subsurface soil, groundwater,

¹ [GeoTracker](https://geotracker.waterboards.ca.gov/) (<https://geotracker.waterboards.ca.gov/>) is the Water Boards' data management system for sites under contamination investigation and cleanup. The GeoTracker ESI Portal is accessed at: <https://geotracker.waterboards.ca.gov/esi/>. New users to the ESI Portal should contact the [GeoTracker Helpdesk](https://geotracker.waterboards.ca.gov/contactus) (<https://geotracker.waterboards.ca.gov/contactus>) to create a ESI account and assistance with uploading data.

² An unapproved work plan shall be revised based on comments from the appropriate Regional Water Board.

- stormwater, and if the facility operates an onsite wastewater treatment plant, the plant influent and effluent; and
- d) describes a proposed sampling plan for these environmental matrices. See **Attachment 2** for the required investigation work plan components.
2. Perform the approved one-time preliminary site investigation.
 3. Submit the results of the one-time preliminary site investigation in a final report to the appropriate Regional Water Board identified in the cover letter. The final report and electronic data deliverables for sample locations and laboratory results shall be submitted electronically into GeoTracker via the ESI Portal, as stipulated by California State law (California Code of Regulations Title 23, Division 3, Chapter 30). The electronic data deliverable requirement includes all analytical data, sample coordinate locations for surface soil, soil borings, groundwater, stormwater, influent, effluent, and monitoring well information (e.g. latitudes, longitudes, elevations, depth to water, well construction information, site maps, and boring logs).

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 (U.S. EPA) 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).³

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 [U.S EPA website](https://www.epa.gov/pfas) (https://www.epa.gov/pfas).

PFAS are manufactured globally and have been used in the production of a wide range of industrial and household products. The vast majority of Class B firefighting foams for extinguishing highly flammable and combustible liquid fires, such as fires at bulk fuel storage terminals and refineries, are aqueous film-forming foams (AFFF). AFFF contains fluorosurfactants in which PFAS are identified as active ingredients. AFFF are likely to be stored and used for fire suppression, fire training, and flammable vapor suppression at bulk fuel storage terminals and refineries.

Petroleum-product storage tanks may use a floating layer of cereal grains treated with PFAS on top of the liquid surface to reduce evaporation loss. Similarly, evaporation of hydrocarbon fuel can be prevented by an aqueous layer containing PFAS. PFAS may also be used to improve the reliability and safety of fuel system seals and hoses, O-rings, and downhole and field equipment gaskets.

PFAS can be used in surfactants to enhance recovery in oil or gas recovery wells; in additives for condensate reduction during gas well drilling; and in hydraulic oils to prevent evaporation, fires, and corrosion. PFAS may be used to provide acid-resistant piping for crude oil transfer, improving safety of oil field and oil-pipeline operations.

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

³ [U.S. EPA Technical Note](https://www.epa.gov/sites/production/files/2017-12/documents/ffrrofactsheet_contaminants_pfos_pfoa_11-20-17_508_0.pdf) (https://www.epa.gov/sites/production/files/2017-12/documents/ffrrofactsheet_contaminants_pfos_pfoa_11-20-17_508_0.pdf) for more information.

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 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 groundwater and surface water impacts and to obtain a preliminary understanding of PFAS concentrations at facilities. The State Water Board has previously directed and intends to direct other dischargers identified as potential PFAS sources in the state to perform PFAS testing. The State Water Board and the Regional Water Boards will evaluate the data collected to make informed decisions in implementing appropriate regulatory action, in anticipation of emerging regulatory standards for PFAS.

In May 2016, U.S. EPA established drinking water Health Advisory Levels of 70 parts per trillion (ppt) (0.07 micrograms per liter (µg/L)) for PFOA and PFOS, individually or combined. These concentrations are now considered a preliminary remediation goal. The U.S. EPA *Draft Interim Recommendations to Address Groundwater Contaminated with Perfluorooctanoic Acid and Perfluorooctane Sulfonate* released in April 2019 suggested setting a remedial screening level at 40 ppt for PFOA and PFOS (individually). For more information on these advisories see the [U.S. EPA PFAS website](http://www.epa.gov/pfas) (www.epa.gov/pfas).

Additionally, in August 2019, the State Water Board Division of Drinking Water lowered the drinking water notification levels for PFOA and PFOS to 5.1 ppt and 6.5 ppt, respectively, and in February 2020, lowered the response levels for PFOA and PFOS from 70 ppt combined to 10 ppt for PFOA and 40 ppt for PFOS based on a running four quarter average. More information on notification levels for PFAS compounds can be found on the [Division of Drinking Water PFOA and PFOS website](https://www.waterboards.ca.gov/drinking_water/certlic/drinking_water/PFOA_PFOS) (https://www.waterboards.ca.gov/drinking_water/certlic/drinking_water/PFOA_PFOS).

Water Code section 106.3 indicates 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. This Order promotes that policy by directing source investigations to determine the presence of PFAS in and near waters of the state.

II. WATER CODE SECTIONS 13267 AND 13383 ORDER FOR TECHNICAL REPORTS

Water Code section 13267(b), provides that “a regional board may require any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region... or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of water within its region shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires ... In requiring those reports, the regional board shall provide the person 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.”

Water Code section 13267(f) authorizes the State Water Board to require this information if it consults with the Regional Water Boards and determines that it will not duplicate the efforts of the Regional Water Boards. The State Water Board has consulted with the Regional Water Boards and made this determination.

Water Code section 13383(a) provides that “the state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements... for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge.” Section 13383(b) continues, “the state board or the regional boards may require any person subject to this section to establish and maintain monitoring equipment or methods, including, where appropriate, biological monitoring methods, sample effluent as prescribed, and provide other information as may be reasonably required.”

The release of PFAS that may be found in AFFF and/or other materials used at bulk fuel storage terminals and refineries into the environment or the disposal of wastes containing PFAS, other than to a permitted facility, constitutes a discharge of waste as defined in Water Code sections 13050(d), 13383, and 13373, and Clean Water Act section 502.

Pursuant to Water Code sections 13267 and 13383, **you are hereby ordered to submit technical reports identified in Attachment 2.** Additional information regarding requirements for submitting technical reports under these sections of the Water Code is included as **Attachment 3.** Any requests for extensions must be submitted to the Regional Water Board identified in the cover letter of this Order for approval by the Executive Officer.

III. COST AND BENEFIT OF TECHNICAL REPORTS

Water Code section 13267(b) specifies that the burden, including costs, of these reports must bear a reasonable relationship to the State Water Board’s need for the reports and the benefits to be obtained from the reports. The cost of preparing the reports required by this Order is estimated to be in the range of \$10,000 to \$30,000.

The cost for the stormwater, influent, and effluent sampling is estimated to be between \$2,000 and \$10,000. Soil and groundwater sampling costs are estimated to be in the range of \$20,000 to \$100,000 depending on the distance to groundwater and the sample collection method appropriate for the site.

The cost of the technical reports bears a reasonable relationship to the benefit to be gained because, in terms of public health and environmental harm, contamination of soil, groundwater, and surface water must be identified before corrective action can be taken, if appropriate. As described further in this Order and in **Attachment 2**, the recipients of this Order are likely discharging PFAS, which the U.S EPA has determined may cause adverse health and ecological effects.

IV. CALIFORNIA ENVIRONMENTAL QUALITY ACT

The issuance of this Order is an action to protect the environment and is categorically exempt from the provisions of the California Environmental Quality Act pursuant to sections 15304 and 15308, Chapter 3, Title 14 of the California Code of Regulations.

V. 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. Violations of Water Code section 13383 may result in civil liability of up to \$25,000 for each day of violation as specified in Water Code section 13385. Please be advised that compliance with this Order is not a substitute for compliance with other applicable laws.

Therefore, pursuant to Water Code sections 13267 and 13383, you are hereby ordered to:

1. Submit/upload a one-time preliminary site investigation work plan to GeoTracker ESI Portal for review and approval by the appropriate Regional Water Board that:
 - a) identifies the PFAS-containing materials in your facility;
 - b) identifies the areas where PFAS-containing materials are stored, used, and/or disposed;
 - c) details the various potential pathways (current and historic) for discharge of PFAS from your facility and the nature of potential PFAS contamination in the surface and subsurface soil, groundwater, stormwater, and if the facility operates an onsite wastewater treatment plant, the plant influent and effluent; and
 - d) describes a proposed sampling plan for these environmental matrices. See **Attachment 2** for the required investigation work plan components.

2. Submit the results of the one-time preliminary site investigation in a final report to the applicable Regional Water Board identified in the cover letter and upload the final report and electronic data deliverables to the State Water Board's GeoTracker system. The technical report and electronic data deliverables for sample locations and laboratory results shall be submitted electronically into GeoTracker via the ESI Portal, as stipulated by California State law (California Code of Regulations Title 23, Division 3, Chapter 30).

Perjury Statement

Pursuant to Water Code section 13267(b)(1), the Water Board requires you to include the following perjury statement, signed by a duly authorized representative, in all reports submitted pursuant to this Order:

"I, Eileen Sobeck, 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."

VI. EXECUTIVE DIRECTOR SIGNATURE

March 12, 2021



Date

Eileen Sobeck
Executive Director

ATTACHMENTS:

Attachment 1 – List of Facilities

**Attachment 2 – Technical Report Requirements for Bulk Fuel Storage Terminals
and Refineries**

**Attachment 3 – Fact Sheet – Requirements for Submitting Technical Reports
under Sections 13267 and 13383 of the Water Code**

ATTACHMENT 1**LIST OF BULK FUEL STORAGE TERMINALS AND REFINERIES**

CALIFORNIA WATER CODE SECTIONS 13267 AND 13383 ORDER FOR THE
DETERMINATION OF THE PRESENCE OF PER- AND POLYFLUOROALKYL SUBSTANCES

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
North Coast Regional Water Board	Unocal Terminal (Eureka)	1200 Railroad Avenue	Eureka	95501	Humboldt	T0602300350	1 12I028024
North Coast Regional Water Board	C Renner Petroleum	255 State Hwy 101 South	Crescent City	95531	Del Norte	T0601500016	1 08I018327
North Coast Regional Water Board	Chevron Prod Co Eureka Terminal	3400 Christie Street	Eureka	95503	Humboldt	T0602300398	1 12I009617
North Coast Regional Water Board	Eel River Fuels Incorporation	3371 North State Street	Ukiah	95482	Mendocino	T10000016396	1 23I009881
North Coast Regional Water Board	Flyers Energy 3017	459 Yolanda Avenue	Santa Rosa	95404	Sonoma	T10000016399	1 49I026190
North Coast Regional Water Board	Redwood Coast Fuels	50 West Lake Mendocino Drive	Ukiah	95482	Mendocino	T10000016400	1 23I021420
San Francisco Bay Regional Water Board	Phillips 66	1300 Canal Boulevard	Richmond	94804	Contra Costa	SL374211188	2 07I026087

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
San Francisco Bay Regional Water Board	The International Group Incorporation	102 Cutting Boulevard	Richmond	94804	Contra Costa	T10000016401	2 07I027054
San Francisco Bay Regional Water Board	Golden Gate Petroleum	1086 Essex Avenue	Richmond	94804	Contra Costa	T10000016403	2 07I026708
San Francisco Bay Regional Water Board	Amorco Terminal Tank Farm	1750 Marina Vista Way	Martinez	94553	Contra Costa	T10000016404	2 07I023613
San Francisco Bay Regional Water Board	Tom Lopes Distribution Incorporation	1790 South 10th Street	San Jose	95112	Santa Clara	T10000016405	2 43I024111
San Francisco Bay Regional Water Board	Southern Counties Oil Company	2075 Alum Rock Avenue	San Jose	92867	Santa Clara	T10000016406	2 43I025436
San Francisco Bay Regional Water Board	Campbell Unified School District	240 North Harrison Avenue	Campbell	95008	Santa Clara	T10000016407	2 43I008012
San Francisco Bay Regional Water Board	General Petroleum Richmond	255 Parr Boulevard	Richmond	94801	Contra Costa	T10000016408	2 07NEC000854
San Francisco Bay Regional Water Board	Napa Valley Petroleum	257 South Kelly Road	American Canyon	94503	Napa	T10000016409	2 28I026432
San Francisco Bay Regional Water Board	General Petroleum Corporation	2950 Hyde Street	San Francisco	94109	San Francisco	T10000016410	2 38NEC003598
San Francisco Bay Regional Water Board	Seaport Refining and Environmental LLC	679 Seaport Boulevard	Redwood City	94063	San Mateo	T10000016411	2 41NEC000996

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
San Francisco Bay Regional Water Board	Ramos Oil Company Fairfield	744 North Texas Street	Fairfield	94533	Solano	T10000016412	2 48I014465
San Francisco Bay Regional Water Board	Valley Oil Company	785 Yuba Drive	Mountain View	94041	Santa Clara	T10000016413	2 43I016525
San Francisco Bay Regional Water Board	Golden Gate Petroleum	905 Stockton Avenue	San Jose	95110	Santa Clara	T10000016414	2 43I011737
San Francisco Bay Regional Water Board	Southern Counties Lubricants	992 Hensley Street	Richmond	94801	Contra Costa	T10000016415	2 07I019594
San Francisco Bay Regional Water Board	Chevron USA, Incorporation – Richmond Refinery	841 Chevron Way	Richmond	94801	Contra Costa	T10000016416	Not applicable
San Francisco Bay Regional Water Board	Swissport Fueling, Incorporation	2500 Seaboard Avenue	San Jose	95131	Santa Clara	T10000016417	Not applicable
San Francisco Bay Regional Water Board	Tesoro - Golden Eagle	150 Solano Way	Pacheco	94553	Contra Costa	T10000016418	Not applicable
San Francisco Bay Regional Water Board	Shell Oil Products - Martinez	3485 Pacheco Boulevard	Martinez	94553	Contra Costa	T10000016419	Not applicable
San Francisco Bay Regional Water Board	BNSF - Richmond	980 Hensley Street, Building 417	Richmond	94801	Contra Costa	T10000016420	Not applicable
San Francisco Bay Regional Water Board	SFO Fuel Company	904 North Access Road	San Francisco	94128	San Francisco	T10000016421	Not applicable

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
San Francisco Bay Regional Water Board	Swissport Fueling, Incorporation	Oakland International Airport	Oakland	94603-6366	Alameda	T10000016422	Not applicable
San Francisco Bay Regional Water Board	Valero Benicia Refinery	3400 East 2nd Street	Benicia	94510	Solano	SL18238656	Not applicable
San Francisco Bay Regional Water Board	Kinder Morgan San Jose Terminal	2150 Kruse Drive	San Jose	95131	Santa Clara	SL0002020074	Not applicable
San Francisco Bay Regional Water Board	Kinder Morgan Brisbane Terminal	950 Tunnel Avenue	Brisbane	94005	San Mateo	SL372271174	Not applicable
San Francisco Bay Regional Water Board	Shell South San Francisco Terminal	135 North Access Road	South San Francisco	94080	San Mateo	SL373231180	Not applicable
San Francisco Bay Regional Water Board	Shell San Jose Terminal	2165 O'Toole Avenue	San Jose	95131	Santa Clara	SL374261193	Not applicable
San Francisco Bay Regional Water Board	Chevron Chemical (Former)	940 Hensley Street	Richmond	94801	Contra Costa	SL18244665	Not applicable
San Francisco Bay Regional Water Board	SC Fuels	2075 Alum Rock Avenue	San Jose	95116	Santa Clara	SL373241181	Not applicable
San Francisco Bay Regional Water Board	KM Phoenix Holdings (formerly BP) Richmond Terminal	1306 Canal Boulevard	Richmond	94807	Contra Costa	T0601300023	Not applicable
San Francisco Bay Regional Water Board	Chevron San Jose Terminal	1020 Berryessa Road	San Jose	95133	Santa Clara	WDR100029102	Not applicable

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
San Francisco Bay Regional Water Board	TransMontaigne (formerly Pacific Atlantic) Martinez Terminal	2801 Waterfront Road	Martinez	94553	Contra Costa	L10005962342	Not applicable
San Francisco Bay Regional Water Board	TransMontaigne (formerly Plains Products) Richmond Terminal	488 Wright Avenue	Richmond	94804	Contra Costa	SL372291176	Not applicable
San Francisco Bay Regional Water Board	Kinder Morgan SFPP Concord Station	1550 Solano Way	Concord	94520	Contra Costa	SL599992811	Not applicable
San Francisco Bay Regional Water Board	PS Trading Bulk Terminal at San Francisco International Airport	Plot 23, San Francisco International Airport	South San Francisco	94128	San Mateo	SL0608182371	Not applicable
San Francisco Bay Regional Water Board	Shell Oil Barge Plant (Plot 22) at San Francisco International Airport	150 North Access Road	South San Francisco	94080	San Mateo	SL374231190	Not applicable
Central Coast Regional Water Board	Southern Counties Oil Company LP	10 Ronan Avenue	Gilroy	95020	Santa Clara	T10000008753	3 43I024579
Central Coast Regional Water Board	Santa Maria Asphalt Refinery	1660 Sinton Road	Santa Maria	93458	Santa Barbara	SL203451379	3 42I011188
Central Coast Regional Water Board	Sturdy Oil Company	33 Associated Lane	Pajaro	95706	Monterey	SL372311382	3 27I025931

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
Central Coast Regional Water Board	Southern Counties Oil Company LP - dba SC Fuels	103 Lee Road	Watsonville	95007	Santa Cruz	T10000016423	3 44I026044
Central Coast Regional Water Board	Valley Pacific Petroleum	1083 Madison Lane	Salinas	93907	Monterey	T10000016424	3 27I024064
Central Coast Regional Water Board	Sturdy Oil Company	1511 Abbott Street	Salinas	93901	Monterey	T10000016425	3 27I027251
Central Coast Regional Water Board	Cardlock Fuels System Incorporation - dba SC Fuels	35 Gonzales River Road	Gonzales	93926	Monterey	T10000016426	3 27I026043
Central Coast Regional Water Board	Phillips 66 Refinery, Santa Maria Facility	2555 Willow Road	Arroyo Grande	93420	San Luis Obispo	SL203121248	Not applicable
Los Angeles Regional Water Board	General Petroleum Corporation Terminal Island	1028 South Seaside Avenue	Terminal Island	90731	Los Angeles	SLT4L3081798	4 19I021320
Los Angeles Regional Water Board	Phillips 66 Company - Los Angeles Terminal	13500 South Broadway	Los Angeles	90061	Los Angeles	SL376412464	4 19I013149
Los Angeles Regional Water Board	Carson Refinery	1801 East Sepulveda Boulevard	Carson	78259	Los Angeles	SL372412434	4 19I024232
Los Angeles Regional Water Board	Chemoil Terminals Corporation	2365 East Sepulveda Boulevard	Long Beach	90810	Los Angeles	SL374472460	4 19I001838
Los Angeles Regional Water Board	Chevron Montebello Terminal	601 South Vail Avenue	Montebello	90640	Los Angeles	SL377462479	4 19I009301

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
Los Angeles Regional Water Board	Van De Pol Petroleum	12904 Park Street	Santa Fe Springs	90670	Los Angeles	T10000016427	4 19I026477
Los Angeles Regional Water Board	Valero Refining Company California	1651 Alameda Street	Wilmington	90744	Los Angeles	T10000016428	4 19I016559
Los Angeles Regional Water Board	Silvas Oil Company Oxnard	1757 East Wooley Road	Oxnard	93030	Ventura	T1000001642	4 56I028080
Los Angeles Regional Water Board	Rancho LPG Holdings LLC	2110 North Gaffey Street	San Pedro	90731	Los Angeles	T10000016430	4 19I022300
Los Angeles Regional Water Board	Southern Counties Oil Company LP - dba SC Fuels	2125 South Riverside Avenue	Colton	92316	Los Angeles	T10000016431	4 19I027345
Los Angeles Regional Water Board	Vernon Lubes	2619 37th Street	Vernon	90058	Los Angeles	T10000016432	4 19NEC002221
Los Angeles Regional Water Board	Vernon Terminal	2709 37th Street	Vernon	90802	Los Angeles	T10000016433	4 19I026666
Los Angeles Regional Water Board	Lubricating Specialties	3365 East Slauson Avenue	Vernon	90058	Los Angeles	T10000016434	4 19I001136
Los Angeles Regional Water Board	Southern Counties Oil Company LP	3815 Vineyard Avenue	Oxnard	93030	Ventura	T10000016435	4 56I024392
Los Angeles Regional Water Board	Orange Line Oil Company Incorporation	404 East Commercial Street	Pomona	91767	Los Angeles	T10000016436	4 19I020065

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
Los Angeles Regional Water Board	Aeropres Corporation	445 South Cataract Avenue	San Dimas	91773	Los Angeles	T10000016437	4 19I018288
Los Angeles Regional Water Board	The Jankovich Company	Berth 74	San Pedro	90731	Los Angeles	T10000016439	4 19I009687
Los Angeles Regional Water Board	Petro-Diamond Terminal Company	1920 Lugger Way	Long Beach	90813-2634	Los Angeles	T10000016440	Not applicable
Los Angeles Regional Water Board	Tesoro Logistics Operations LLC	2149 East Sepulveda Boulevard	Carson	90749	Los Angeles	T10000016441	Not applicable
Los Angeles Regional Water Board	Tesoro Logistics Operations LLC	2350 Obispo Avenue	Signal Hill	90755	Los Angeles	T10000016442	Not applicable
Los Angeles Regional Water Board	Oxnard Refinery - Tenby Incorporation	3450 East 5th Street	Oxnard	93030	Ventura	T10000016443	Not applicable
Los Angeles Regional Water Board	Vopak Terminal Long Beach	3601 Dock Street	San Pedro	90731	Los Angeles	T10000016444	Not applicable
Los Angeles Regional Water Board	Santa Clara Valley Gas Plant	3824 Guiberson Road	Fillmore	93015	Ventura	T10000016445	Not applicable
Los Angeles Regional Water Board	Vopak Terminal Los Angeles, Incorporation	401 Canal Street	Wilmington	90744	Los Angeles	T10000016446	Not applicable
Los Angeles Regional Water Board	BNSF - Commerce	6300 Sheila Street	Los Angeles	90040	Los Angeles	T10000016447	Not applicable

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
Los Angeles Regional Water Board	Shell Oil Products US	8100 Haskell Avenue	Van Nuys	91406	Los Angeles	T10000016448	Not applicable
Los Angeles Regional Water Board	Los Angeles Marine Terminal (LAMT) Berth 148-151	885 South Pier A Street, Berths 148-151	Wilmington	90744	Los Angeles	SLT4307169	Not applicable
Los Angeles Regional Water Board	Former Mobil Torrance Refinery	3700 West 190th Street	Torrance	90504	Los Angeles	SL372452438	Not applicable
Los Angeles Regional Water Board	Unocal - Torrance Tank Farm	2650 West Lomita Boulevard	Torrance	90505	Los Angeles	SLT4302826	Not applicable
Los Angeles Regional Water Board	Tesoro Vinvale Terminal	8601 South Garfield Avenue	South Gate	90280	Los Angeles	SL373452448	Not applicable
Los Angeles Regional Water Board	Torrance Logistics Company Southwest Terminal One	799 South Seaside Avenue	Terminal Island	90731	Los Angeles	SL204701660	Not applicable
Los Angeles Regional Water Board	Chevron El Segundo Refinery	324 West El Segundo Blvd	El Segundo	90245	Los Angeles	SL372482441	Not applicable
Los Angeles Regional Water Board	Valero Wilmington Refinery (Former Ultramar Refinery)	2402 East Anaheim Street	Wilmington	90744	Los Angeles	SL373432446	Not applicable
Los Angeles Regional Water Board	Arco (Tesoro) East Hynes Terminal	5905 Paramount Boulevard	Long Beach	90805	Los Angeles	SL373462449	Not applicable

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
Los Angeles Regional Water Board	Paramount Petroleum Refinery	14700 Downey Avenue	Paramount	90273	Los Angeles	SL373402443	4 19I027557
Los Angeles Regional Water Board	Unocal - Tosco Los Angeles Refinery (Wilmington)	1660 West Anaheim Street	Wilmington	90744	Los Angeles	SLT43132130	Not applicable
Los Angeles Regional Water Board	SHORE Terminals (Wilmington)	841 La Paloma Street	Wilmington	90744	Los Angeles	SL376472470	Not applicable
Los Angeles Regional Water Board	KMEP Carson Terminal (Former GATX)	2000 East Sepulveda Blvd	Carson	90810	Los Angeles	SLT43129127	Not applicable
Los Angeles Regional Water Board	Shell - Carson Terminal	20945 Wilmington Avenue	Carson	90810	Los Angeles	SL373472450	Not applicable
Los Angeles Regional Water Board	Shell - Mormon Island	Berths 167-169	Los Angeles	90744	Los Angeles	SLT4229A1784	Not applicable
Los Angeles Regional Water Board	Shell (Tesoro) Los Angeles Refinery	2101 East Pacific Coast Hwy	Wilmington	90744	Los Angeles	SL372432436	Not applicable
Los Angeles Regional Water Board	Lunday-Thagard Company, dba World Oil Refining	9301 South Garfield Avenue	South Gate	90280	Los Angeles	SL377472480	4 19I003170
Los Angeles Regional Water Board	Shell Bulk Fuel Distribution Terminal	2457 Redondo Avenue	Signal Hill	90755	Los Angeles	T10000001051	Not applicable
Los Angeles Regional Water Board	Western Fuel Oil Company	2100 North Gaffey Avenue	San Pedro	90731	Los Angeles	SL372472440	Not applicable

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
Los Angeles Regional Water Board	UPRC Bulk Terminal (Former)	960 De Forest Avenue	Long Beach	90813	Los Angeles	SL2048H2365	Not applicable
Los Angeles Regional Water Board	Phillips 66 Los Angeles Refinery	1520 East Sepulveda Boulevard	Carson	90810	Los Angeles	T10000016449	Not applicable
Central Valley Regional Water Board	Kern Oil and Refining Company	7724 East Panama Lane	Bakersfield	93307	Kern	SL372524510	5F151025880
Central Valley Regional Water Board	Ramos Oil Company Isleton	14972 CA-160	Isleton	95641	Sacramento	SL0606774760	5S341017714
Central Valley Regional Water Board	Elk Grove Terminal	10090 Waterman Road	Elk Grove	95624	Sacramento	T10000016450	5S341027984
Central Valley Regional Water Board	Bakersfield Terminal	1201 China Grade Loop	Bakersfield	93308	Kern	T10000016451	5F151027985
Central Valley Regional Water Board	Pazin Myers Incorporation	129 West 15th Street	Merced	95340	Merced	T10000016452	5F241011841
Central Valley Regional Water Board	Ramos Oil Company West Sacramento	1515 South River Road	West Sacramento	95691	Yolo	T10000016453	5S571024719
Central Valley Regional Water Board	Southern Counties Oil Company LP	237 East Whitmore Avenue	Modesto	95358	Stanislaus	T10000016454	5S501024391
Central Valley Regional Water Board	SST Oil Incorporation	2370 Wyndham Lane	Redding	96099	Shasta	T10000016455	5R451015948

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
Central Valley Regional Water Board	Southern Counties Oil Company	2822 South Orange Avenue	Fresno	93725	Fresno	T10000016456	5F10I024393
Central Valley Regional Water Board	Southern Counties Oil Company	3220 South Parkway Drive	Fresno	92867	Fresno	T10000016457	5F10I027525
Central Valley Regional Water Board	San Joaquin Refining Company	3542 Shell Street	Bakersfield	93308	Kern	T10000016458	5F15I025611
Central Valley Regional Water Board	Southern Counties Oil Co LP, dba SC Fuels	4517 Standard Street	Bakersfield	93308	Kern	T10000016459	5F15I026045
Central Valley Regional Water Board	J W Myers Incorporation	546 East Olive Avenue	Madera	93638	Madera	T10000016460	5F20I013238
Central Valley Regional Water Board	Alon Bakersfield Refinery	6451 Rosedale Highway	Bakersfield	93308	Kern	T10000016461	5F15I027239
Central Valley Regional Water Board	Golden Gate Petroleum	8285 Brentwood Boulevard	Brentwood	94513	Contra Costa	T10000016462	5S07I012265
Central Valley Regional Water Board	Buckeye Development & Logistics II LLC	1601 South River Road	West Sacramento	95691	Yolo	T10000016463	Not applicable
Central Valley Regional Water Board	Belridge Gas Plant	19178 Gustafson Drive	McKittrick	93251	Kern	T10000016464	Not applicable
Central Valley Regional Water Board	Plains LPG Services	19430 Beech Avenue	Shafter	93623	Kern	T10000016465	Not applicable

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
Central Valley Regional Water Board	Buckeye Development & Logistics II LLC	2700 West Washington Street	Stockton	95203	San Joaquin	T10000016466	Not applicable
Central Valley Regional Water Board	California Resources Elk Hills LLC	28590 Hwy 119	Tupman	93276	Kern	T10000016467	Not applicable
Central Valley Regional Water Board	Tesoro Logistics Operations LLC	3003 Navy Drive	Stockton	95205	San Joaquin	T10000016468	Not applicable
Central Valley Regional Water Board	SFPP, LP	4149 South Maple Avenue	Fresno	93725	Fresno	T10000016469	Not applicable
Central Valley Regional Water Board	Belridge/Kernridge Gas Plant	59231 Main Camp Road	McKittrick	93251	Kern	T10000016470	Not applicable
Central Valley Regional Water Board	Allied Aviation Fueling Company, Incorporation	7330 Earhart Drive	Sacramento	95837	Sacramento	T10000016471	Not applicable
Central Valley Regional Water Board	Midstream Energy Partners (USA) LLC	9224 Tupman Road	Tupman	93276	Kern	T10000016472	Not applicable
Central Valley Regional Water Board	Kinder Morgan Incorporation SFPP Chico Terminal	2570 Hegan Lane	Redding	95927	Butte	SL375402884	Not applicable
Central Valley Regional Water Board	Sunland Refining Company Corporation	2152 Coffee Road	Bakersfield	93308-5746	Kern	SL205224272	Not applicable
Central Valley Regional Water Board	Tosco Refining Lower Lake	16445 Morgan Valley Road	Lower Lake	90806	Lake	SL375443649	Not applicable

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
Central Valley Regional Water Board	Chevron Sacramento Terminal	2420 Front Street	Sacramento	95818	Sacramento	T0606700657	Not applicable
Central Valley Regional Water Board	Tosco 76 Broadway	76 Broadway	Sacramento	95818	Sacramento	SL0606742138	Not applicable
Central Valley Regional Water Board	Shell Opus - West Sacramento	1509 South River Road	West Sacramento	95691	Yolo	SL373533625	Not applicable
Central Valley Regional Water Board	KMEP West Sacramento	1570 South River Road	West Sacramento	95691	Yolo	SL375133637	Not applicable
Central Valley Regional Water Board	KMEP Stockton	2947 Navy Drive	Stockton	95206	San Joaquin	SL373513623	Not applicable
Central Valley Regional Water Board	KMEP Bradshaw	2901 Bradshaw Road	Sacramento	95827	Sacramento	SL373503622	Not applicable
Lahontan Regional Water Board	BNSF - Barstow	200 North Avenue H	Barstow	92311	San Bernardino	T10000016473	Not applicable
Lahontan Regional Water Board	Calnev Pipe Line, LLC	34277 Daggett-Yermo Road	Daggett	92327	San Bernardino	T10000016474	Not applicable
Colorado River Regional Water Board	Callan Oil Distributing Incorporation	332 West Chanslor Way	Blythe	92225	Riverside	T10000016475	7 33I027851
Santa Ana Regional Water Board	Merit Oil Company	1020 Bloomington Avenue	Bloomington	92316	San Bernardino	T0607100201	8 36I019866

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
Santa Ana Regional Water Board	Southern Counties Lubricants LLC	1825 West Collins Avenue	Orange	92867	Orange	T0605918794	8 30I019537
Santa Ana Regional Water Board	Safety Kleen Corporation Santa Ana Branch	2120 South Yale Street	Santa Ana	92704	Orange	T0605901829	8 30I001837
Santa Ana Regional Water Board	Southern Counties Oil Company	2143 Cactus Avenue	Bloomington	92316	San Bernardino	T10000016479	8 36NEC002447
Santa Ana Regional Water Board	Alexis Oil Company	219 Glider Circle	Corona	92880	Riverside	T10000016480	8 33I026022
Santa Ana Regional Water Board	Flyers # 3018	2756 South Riverside Avenue	Bloomington	92316	San Bernardino	T10000016481	8 36NEC003401
Santa Ana Regional Water Board	Jagur Tractor	3613 Philadelphia Street	Chino	91710	San Bernardino	T10000016482	8 36I019947
Santa Ana Regional Water Board	Flyers Energy 3015	571 West Slover Avenue	Bloomington	92316	San Bernardino	T10000016483	8 36NEC002113
Santa Ana Regional Water Board	SFPP, LP	1350 North Main Street	Orange	92867	Orange	T10000016484	Not applicable
Santa Ana Regional Water Board	Chevron Huntington Beach Terminal	17881 Gothard Street	Huntington Beach	92647	Orange	T10000016485	Not applicable
Santa Ana Regional Water Board	Aircraft Service International, Incorporation	Airport Drive	Ontario	91761	San Bernardino	T10000016486	Not applicable

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
Santa Ana Regional Water Board	American Lubrication Equipment Company	1251 North Patt Street	Anaheim	92801	Orange	T10000016487	8 30IN604728
Santa Ana Regional Water Board	Torrance Logistics Company Former Mobil Atwood Terminal	1477 Jefferson Street	Anaheim	92807	Orange	SLT8R1594080	Not applicable
Santa Ana Regional Water Board	Former SC Fuels Bulk Facility	1011 El Camino Real	Tustin	92680	Orange	T0605900566	Not applicable
Santa Ana Regional Water Board	Former Mobil Oil Bulk Terminal	137 South Alessandro Street	Hemet	92543	Riverside	T10000002056	Not applicable
Santa Ana Regional Water Board	Former Mobil Oil Bulk Terminal	4526 Commerce Street	Riverside	92507	Riverside	T0606500083	Not applicable
Santa Ana Regional Water Board	Calnev Pipe Line, LLC	2051 East Slover Avenue	Bloomington	92316	San Bernardino	SL0607118784	Not applicable
Santa Ana Regional Water Board	Unocal Bulk Plant (Former)	106 South Ramona Street	Hemet	92343	Riverside	T0606500092	Not applicable
Santa Ana Regional Water Board	Unocal Bulk Plant (Former)	601 East Main Street	Ontario	91761	Riverside	T0607100129	Not applicable
San Diego Regional Water Board	Southern Counties Lubricants LLC 11	1321 Distribution Way	Vista	92081	San Diego	T10000016488	9 37NEC002298

Regional Water Board	Facility Name	Facility Address	City	Zip Code	County	GeoTracker Global ID	SMARTS ID
San Diego Regional Water Board	Southern Counties Lubricants LLC 12	145 Via Vera Cruz	San Marcos	92078	San Diego	T10000016489	9 37NEC002299
San Diego Regional Water Board	Southern Counties Oil Company	2780 Via Orange Way, Units B-C	Spring Valley	91978	San Diego	T10000016490	9 37NEC003690
San Diego Regional Water Board	Soco Escondido Bulk Plant	321 South Quince Street	Escondido	92025	San Diego	T10000016491	9 37I021829
San Diego Regional Water Board	Dion and Sons Incorporation	7111 Mission Gorge Road	San Diego	92120	San Diego	T10000016492	9 37I023692
San Diego Regional Water Board	Southern Counties Lubricants LLC	7954 Dagget Street	San Diego	92111	San Diego	T10000016493	9 37I025687
San Diego Regional Water Board	Chevron San Diego Terminal	2351 East Harbor Drive	San Diego	92113	San Diego	T10000016494	Not applicable
San Diego Regional Water Board	Allied Aviation Fueling Company, Incorporation	3698 Pacific Highway, #C	San Diego	92101	San Diego	T10000016496	Not applicable
San Diego Regional Water Board	The Jankovich Company	961 East Harbor Drive	San Diego	92101	San Diego	T10000016497	Not applicable
San Diego Regional Water Board	Mission Valley Terminal	9950 San Diego Mission Road	San Diego	92108	San Diego	SL607392800	Not applicable

ATTACHMENT 2

**TECHNICAL REPORT REQUIREMENTS
FOR
BULK FUEL STORAGE TERMINALS AND REFINERIES
WATER CODE SECTIONS 13267 AND 13383 ORDER FOR THE
DETERMINATION OF THE PRESENCE OF
PER- AND POLYFLUOROALKYL SUBSTANCES**

Contents:

- I. Justification for the Need for Technical Reports*
- II. One-time Preliminary Site Investigation and Technical Report Requirements*

I. JUSTIFICATION FOR THE NEED FOR TECHNICAL REPORTS

Pursuant to section 6773, articles 5 of sub-chapter 15; and section 5624, article 147 of group 20 of sub-chapter 7; chapter 4, division 1, title 8 of the California Code of Regulations, suitable fire-control devices are required and shall be inspected, tested, and maintained in serviceable condition at locations where fires are likely to occur. The majority of Class B fluorine-containing firefighting foams for extinguishing highly flammable or combustible liquid fires, such as fires involving bulk fuel storage terminals and refineries, are AFFF. AFFF contain fluorosurfactants in which PFAS are identified as the active ingredients. AFFF may have been stored and used for fire suppression, fire training, and flammable vapor suppression at bulk fuel storage terminals and refineries. AFFF can be released into the environment through a variety of practices and mechanisms including, but not limited to:

- Low volume releases/spills of foam concentrate during handling, storage, transfer or equipment calibration.
- Moderate volume discharge of foam solution for apparatus testing.
- Occasional, high volume discharge of foam solution for firefighting and fire suppression/prevention.
- Periodic, high volume discharge for fire training.
- Leaks from foam distribution piping between storage and pumping locations.

Petroleum-product storage tanks may use a floating layer of cereal grains treated with PFAS on top of the liquid surface to reduce evaporation loss. Similarly, evaporation of hydrocarbon fuel can be prevented by an aqueous layer containing PFAS. PFAS may also be used to improve the reliability and safety of fuel system seals and hoses, O-rings, downhole and field equipment gaskets, and oil-pipeline operations.

Based on the above discussion, it is reasonable to conclude that PFAS-containing materials may be present at most bulk fuel storage terminals and refineries. If PFAS-containing materials were used, disposed of, discharged to, spilled, or released in any way at your facility, a work plan is required for the preliminary investigation of soil, groundwater, surface water, influent and effluent must also be investigated if the facility operates an onsite wastewater treatment system (see **Section II.A** below). The State Water Board seeks to determine whether the soil, groundwater, and/or surface water at your location is impacted by PFAS and obtain a preliminary understanding of PFAS concentrations at your facility.

To identify appropriate facilities to be included in this Order, the State Water Board reviewed the information provided on the Internal Revenue Service (IRS) and the California Air Resources Board (CARB) websites to identify facilities that may have used PFAS-containing materials. The State Water Board also reviewed the Water Boards' Stormwater Multiple Application and Report Tracking System (SMARTS) database to identify permitted facilities with the Standard Industrial Classification (SIC) codes of 2911⁴ (Petroleum Refining), 5171⁵ (Petroleum Bulk Stations and Terminals), and 5172⁶ (Petroleum and Petroleum Products Wholesales, Except Bulk Stations and Terminals). In addition, the State Water Board collaborated with the Regional Water Boards to identify other bulk fuel storage terminals and refineries under current cleanup oversight that the State Water Board did not include in the above datasets.

The State Water Board is authorized by Water Code section 13267 to require dischargers, past dischargers, or suspected dischargers to furnish technical or monitoring reports under penalty of perjury. The release of PFAS into the environment or the disposal of waste containing PFAS constitutes a discharge of waste as defined in Water Code section 13050(d). Water Code sections 13383(a) and (b) authorize the State Water Board and the Regional Water Boards to require monitoring and sampling of effluent wastes discharged to navigable water or wastewater treatment plants. Water

⁴ The U.S Department of Labor - Occupational Safety and Health Administration (OSHA) identifies the SIC Code 2911 (Petroleum Refining) as "establishments primarily engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, and lubricants, through fractionation or straight distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking or other processes."

⁵ The U.S Department of Labor - OSHA identifies the SIC Code 5171 (Petroleum Bulk Stations and Terminals) as "establishments primarily engaged in the wholesale distribution of crude petroleum and petroleum products, including liquefied petroleum gas, from bulk liquid storage facilities."

⁶ The U.S Department of Labor - OSHA identifies the SIC Code 5172 (Petroleum and Petroleum Products Wholesalers, Except Bulk Stations and Terminals) as "establishments primarily engaged in the wholesale distribution of petroleum and petroleum products, except those with bulk liquid storage facilities. Included are packaged and bottled petroleum products distributors, truck jobbers, and others marketing petroleum and its products at wholesale, but without bulk liquid storage facilities."

Code section 13001 states that the State Water Board and each Regional Water Board shall be the principal state agencies with primary responsibility for the coordination and control of water quality. State Water Board Resolution No. 92-49 outlines a phased approach to site investigation to facilitate delineation and cleanup.

The State Water Board has already directed PFAS testing at 30 airports, 196 landfills, 271 chrome plating facilities, and 249 wastewater treatment plant facilities. The State Water Board intends to target other potential PFAS sources in the state if needed, to do the same. The State Water Board and the Regional Water Boards will evaluate the data collected to make informed decisions in implementing appropriate regulatory actions, in anticipation of emerging regulatory standards for PFAS.

II. ONE-TIME PRELIMINARY SITE INVESTIGATION AND TECHNICAL REPORT REQUIREMENTS

A. One-time Preliminary Site Investigation Work Plan

You are required to submit a work plan for a one-time preliminary site investigation of PFAS impacts if AFFF and/or any other substances potentially containing PFAS were used, stored, disposed, discharged, spilled, or released in any way to surface and subsurface soil, influent, effluent, groundwater, and/or stormwater at your facility. The work plan shall be uploaded to the State Water Board's GeoTracker database and received by the Regional Water Board specified in the Order cover letter **no later than June 2, 2021**. Requests for extensions must be submitted to the appropriate Regional Water Board's Executive Officer for approval.

The Regional Water Board 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.

At a minimum, provide the following in your work plan:

1. How (including the type, characteristics, and quantities of industrial materials stored and handled), when, and where the potential PFAS-containing materials were stored, used, and/or released.
2. Potential and known release areas to surface and subsurface soil, influent, effluent, groundwater, and/or stormwater where the presence of PFAS-containing materials is either documented or suspected.

Examples of investigation areas include, but are not limited to, material handling and storage areas, accidental spill areas, firefighting training areas, emergency response actions, buildings that have an AFFF system or store AFFF, historical fire locations, waste pits, storage tanks using PFAS-containing materials to prevent product evaporation, areas downwind of air emissions, etc.

3. Description of any practices for material storage and/or use, including secondary containment and leak detection systems; and handling or control processes utilized.
4. 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.
5. Proposed sampling locations for surface and subsurface soil, influent, effluent, groundwater, and/or stormwater where PFAS may be currently and/or may have historically been released.

- a) Surface and Subsurface Soil Sampling: Surface and subsurface soil samples shall be collected to delineate surficial and vertical extent of impacts where PFAS are potentially or known to be released to land/soil.
- b) Groundwater Sampling: Existing groundwater monitoring wells may be used in lieu of grab groundwater samples if they are located in proximity and hydrogeologically downgradient to the known or suspected source area and if functioning properly so that representative groundwater samples can be collected. PFAS and petroleum hydrocarbon fuels may co-mingle in groundwater at refineries and bulk fuel storage terminals, creating groundwater plumes that migrate further than typical contaminant plumes and may appear to be detached from the source. Sampling of existing groundwater wells may confirm the presence or absence of such highly mobile PFAS plumes, if applicable.

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

- c) Stormwater Sampling: Stormwater samples shall be collected within four (4) hours of the start of discharge from a rain event. Samples must be representative of the quality of stormwater associated with the facility's industrial materials and activities. These samples can be collected concurrently with regularly scheduled stormwater sampling events, if applicable.
- d) Influent Sampling: Influent sampling only applies to facilities that have an onsite wastewater treatment plant. Influent samples shall be collected from location(s) prior to any treatment and in such a manner to ensure that samples are representative of all wastewater associated with the facility's industrial discharge.

Two (2) influent samples shall be collected: one (1) sample that is representative of the facility's un-treated wastewater, and one (1) sample that is representative of the stormwater commingled with the facility's un-treated wastewater, if applicable.

- e) Effluent Sampling: Effluent sampling only applies to facilities that have an onsite wastewater treatment plant. Effluent sampling location(s) must

produce samples representative of the treated wastewater associated with the facility's industrial activities.

6. A site map showing the following:
 - a) the facility boundary;
 - b) areas where the potential PFAS-containing materials were stored, used, and/or released;
 - 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) proposed sampling locations for surface and subsurface soil, influent, effluent, groundwater, and/or stormwater samples described in **Section II.A.5** above.

The site map must include a legend, compass rose, scale, and other information necessary to ensure the map is clear and understandable. Required information may be provided on multiple site maps.

7. 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](http://www.waterboards.ca.gov/water_issues/programs/pfas) (www.waterboards.ca.gov/water_issues/programs/pfas).

B. One-time Preliminary Site Investigation and Final Report

Perform an investigation based on the details described in the approved work plan; and submit a final report. The final report must be submitted **no later than 90 days** following the receipt of the last laboratory analytical report. Any requests for extensions must be submitted to the local Regional Water Board's Executive Officer for approval.

At a minimum, the one-time preliminary investigation final report must include the following:

- a) A description of the sampling activities performed and any deviations from the approved work plan;
- b) A summary table of the analytical results (including QA/QC samples);
- c) A copy of the Chain-of-Custody forms;
- d) A copy of the field sampling logs;

- e) A copy of boring logs, temporary/permanent monitoring well construction details, survey data for permanent monitoring wells, and location data for other sampling points;
- f) A copy of the site map showing the sampling/monitoring locations; and
- g) A copy of laboratory certified analytical results.

C. Report and Electronic Laboratory Data Submittal Requirements

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, as stipulated by California state law (California Code of Regulations, Title 23, Division 3, Chapter 30). 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](https://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/) (https://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.

Note: 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).

D. Analytical Laboratory Requirements

The analytical laboratory must be accredited by the California Environmental Laboratory Accreditation Program (ELAP) to perform the method compliant with Department of Defense (DoD) Table B-15 of Quality Systems Manual ([QSM](https://denix.osd.mil/edqw/documents/)) (<https://denix.osd.mil/edqw/documents/>), dated 2019 version 5.3 or later. The laboratory must be capable of quantifying the target PFAS analytes listed in **Table 1** of this Order. 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/) (<https://www.waterboards.ca.gov/pfas/>). For the general parameters listed in **Table 2** of this Order, the method of analysis shall be appropriate for the expected concentrations.

E. Licensed Professional Oversight

Oversight of investigation, interpretation of results, and preparation of documents must be completed by a California professional geologist, registered certified specialty geologist, or licensed civil engineer. Signature of an appropriate licensed professional is required by the Water Code section 13273, and California Business and Professions Code sections 6735(a) and 7835. The signature, stamp, and contact information for the professional geologist, registered certified specialty geologist, or licensed civil engineer acting in responsible charge must be present in the work plan and investigation report.

TABLE 1**PFAS ANALYTES SUBJECT TO ANALYSIS
AND THEIR RESPECTIVE REPORTING LIMITS¹**

Chemical Name/ Abbreviation(s)	GeoTracker PARLABEL	Chemical Abstracts Service (CAS) No.	Required Reporting Limit for Influent (ng/L)	Required Reporting Limit for Effluent (ng/L)	Required Reporting Limit for Groundwater (ng/L)	Required Reporting Limit for Stormwater (ng/L)	Required Reporting Limit for Soil (ng/g)
Perfluorobutanoic acid (PFBA)	PFBA, PFBTA	375-22-4	80.0	80.0	8.0	8.0	1.0
Perfluoropentanoic acid (PFPeA)	PFPeA, PFPA	2706-90-3	50.0	50.0	5.0	5.0	1.0
Perfluorohexanoic acid (PFHxA)	PFHxA, PFHA	307-24-4	50.0	50.0	5.0	5.0	1.0
Perfluoroheptanoic acid (PFHpA)	PFHPA	375-85-9	50.0	50.0	5.0	5.0	1.0
Perfluorooctanoic acid (PFOA)	PFOA	335-67-1	50.0	50.0	5.0	5.0	1.0
Perfluorononanoic acid (PFNA)	PFNA	375-95-1	50.0	50.0	5.0	5.0	1.0
Perfluorodecanoic acid (PFDA)	PFDA, PFNDCA	335-76-2	50.0	50.0	5.0	5.0	1.0
Perfluoroundecanoic acid (PFUnDA)	PFUnA, PFUNDCA	2058-94-8	50.0	50.0	5.0	5.0	1.0
Perfluorododecanoic acid (PFDoA)	PFDOA	307-55-1	50.0	50.0	5.0	5.0	1.0
Perfluorotridecanoic acid (PFTrDA)	PFTrDA, PFTRIDA	72629-94-8	50.0	50.0	5.0	5.0	1.0

Chemical Name/ Abbreviation(s)	GeoTracker PARLABEL	Chemical Abstracts Service (CAS) No.	Required Reporting Limit for Influent (ng/L)	Required Reporting Limit for Effluent (ng/L)	Required Reporting Limit for Groundwater (ng/L)	Required Reporting Limit for Stormwater (ng/L)	Required Reporting Limit for Soil (ng/g)
Perfluorotetradecanoic acid (PFTA)	PFTA, PFTEDA	376-06-7	80.0	80.0	8.0	8.0	2.0
Perfluorobutane sulfonic acid (PFBS)	PFBS, PFBSA	375-73-5	50.0	50.0	5.0	5.0	1.0
Perfluoropentane sulfonic acid (PFPeS)	PFPEs	2706-91-4	50.0	50.0	5.0	5.0	1.0
Perfluorohexane sulfonic acid (PFHxS)	PFHXS, PFHXSA	355-46-4	50.0	50.0	5.0	5.0	1.0
Perfluoroheptane sulfonic acid (PFHpS)	PFHpS, PFHPsA	375-92-8	50.0	50.0	5.0	5.0	1.0
Perfluorooctane sulfonic acid (PFOS)	PFOS, PFOS_A	1763-23-1	50.0	50.0	5.0	5.0	1.0
Perfluorodecane sulfonic acid (PFDS)	PFDS, PFDSA	335-77-3	50.0	50.0	5.0	5.0	1.0
Perfluorooctanesulfonamide (PFOSAm)	PFOSA	754-91-6	80.0	80.0	8.0	8.0	1.0
N-Ethyl perfluorooctane sulfonamido ethanol (EtFOSE)	ETFOSE	1691-99-2	80.0	80.0	8.0	8.0	2.0
N-Methyl perfluorooctane sulfonamido ethanol ² (MeFOSE)	MEFOSE	24448-09-7	80.0	80.0	8.0	8.0	2.0
N-Ethyl perfluorooctane sulfonamide ² (EtFOSAm)	EtFOSAm, ETFOSA	4151-50-2	80.0	80.0	8.0	8.0	2.0

Chemical Name/ Abbreviation(s)	GeoTracker PARLABEL	Chemical Abstracts Service (CAS) No.	Required Reporting Limit for Influent (ng/L)	Required Reporting Limit for Effluent (ng/L)	Required Reporting Limit for Groundwater (ng/L)	Required Reporting Limit for Stormwater (ng/L)	Required Reporting Limit for Soil (ng/g)
N-Methyl perfluorooctane sulfonamide (MeFOSA, MeFOSAm)	MeFOSAm, MEFOSA	31506-32-8	80.0	80.0	8.0	8.0	2.0
N-Methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	NMEFOSAA	2355-31-9	80.0	80.0	8.0	8.0	2.0
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	NETFOSAA	2991-50-6	80.0	80.0	8.0	8.0	2.0
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	4:2FTS	757124-72-4	80.0	80.0	8.0	8.0	2.0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	6:2FTS	27619-97-2	80.0	80.0	8.0	8.0	2.0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	8:2FTS	39108-34-4	80.0	80.0	8.0	8.0	2.0
Hexafluoropropylene Oxide Dimer Acid ² (HFPO-DA)	HFPO-DA, HFPA-DA	13252-13-6	80.0	80.0	8.0	8.0	5.0
4,8-Dioxa-3H- perfluorononanoic acid ² (ADONA)	ADONA	919005-14-4	80.0	80.0	8.0	8.0	5.0
9-Chlorohexadecafluoro-3- oxanonane-1-sulfonic acid ² (9- Cl-PF3ONS)	9CIPF3ONS	756426-58-1	80.0	80.0	8.0	8.0	5.0

Chemical Name/ Abbreviation(s)	GeoTracker PARLABEL	Chemical Abstracts Service (CAS) No.	Required Reporting Limit for Influent (ng/L)	Required Reporting Limit for Effluent (ng/L)	Required Reporting Limit for Groundwater (ng/L)	Required Reporting Limit for Stormwater (ng/L)	Required Reporting Limit for Soil (ng/g)
11-Chloroeicosafluoro-3- oxaundecane-1-sulfonic acid ² (11-Cl-PF3OUdS)	11CIPF3OUd S	763051-92-9	80.0	80.0	8.0	8.0	5.0

Abbreviations:

ng/L = nanogram per liter

ng/g = nanogram per gram

Notes:

1. The laboratory must use the minimum standard data qualifiers provided in the DoD QSM. These data qualifiers must be included in the analytical electronic data format (EDF) submittal into GeoTracker. Refer to GeoTracker's [data dictionary](https://www.waterboards.ca.gov/ust/electronic_submittal/docs/edf_data_dict_2001.pdf) (https://www.waterboards.ca.gov/ust/electronic_submittal/docs/edf_data_dict_2001.pdf) 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 on GeoTracker's [search](https://geotracker.waterboards.ca.gov/search/vl.asp) for valid values (https://geotracker.waterboards.ca.gov/search/vl.asp.)
2. These are the target reporting limits for the California Water Board Investigatory Orders and represent the highest reporting limits acceptable 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.
3. The acceptable quality control limits for these analytes are not listed in Table C-44 Method PFAS by LCMSMS Compliant with QSM Table B-15 Aqueous Matrix or Table C-45 Method PFAS by LCMSMS Compliant with QSM Table B-15 Solid Matrix of the [DoD Quality Systems Manual \(QSM\), Version 5.3](https://denix.osd.mil/edqw/documents/) (https://denix.osd.mil/edqw/documents/). The laboratory must use in-house acceptance criteria for control samples for these analytes per the DoD QSM.

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	

ATTACHMENT 3

Fact Sheet – Requirements for Submitting Reports Under Sections 13267 and 13383 of the Water Code

What does it mean when the Regional Water Board or the State Water Board (jointly referred to as the Water Boards) require a technical report?

Section 13267ⁱ of the 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.” Additionally, the State Water Board may carry out the authority granted to a Regional Board pursuant to section 13267 if, after consulting with the Regional Water Board, the State Board determines that it will not duplicate the efforts of the Regional Board. Water Code section 13383 provides that the State Board or a Regional Board may establish monitoring and reporting requirements for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge.

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 Water Boards use 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 Water Boards can ask for?

Yes. Under section 13267 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 Water Boards are required to explain the reasons for its request.

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 Water Boards can impose a fine of up to \$10,000 per day, and a court can impose fines of up to \$25,000 per day as well as criminal penalties pursuant to Water Code section 13268. 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 is advisable.

If I have more questions, whom do I ask?

Questions regarding this Order should be directed to the appropriate Regional Water Board identified in the cover letter of this Order

ⁱ All code sections referenced herein can be found by going to www.leginfo.legislature.ca.gov.