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**Santa Ana Regional Water Quality Control Board**

March 20, 2019

Jim Harris  
Capital Projects Manager  
San Bernardino International Airport Authority  
1601 East 3rd Street  
San Bernardino, CA 92408  
(jharris@sbdairport.com)

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

**DIRECTIVE FOR SOIL AND GROUNDWATER INVESTIGATION FOR THE DETERMINATION  
OF THE PRESENCE OF SELECTED PER- AND POLYFLUOROALKYL SUBSTANCES;  
PURSUANT TO  
CALIFORNIA WATER CODE SECTION 13267 (ORDER NO. R8-2019-0044)  
SAN BERNARDINO INTERNATIONAL AIRPORT, SAN BERNARDINO, CALIFORNIA**

Dear Mr. Harris,

Enclosed is Order No. R8-2019-0044, which is being issued pursuant to California Water Code section 13267 by the Santa Ana Regional Water Quality Control Board (the Regional Board) and requires that you perform an environmental investigation and submit the requested technical reports.

San Bernardino International Airport is identified as a facility that has accepted, stored, or used materials that may contain per- and polyfluoroalkyl substances (PFAS). This Order requires you to investigate impacts from specific PFAS in the vicinity of your facility, and submit technical reports as specified in the Order and related attachments. If your facility does not accept these PFAS materials, you may so specify by submitting the completed questionnaire included in the Order as Attachment 2.

If you have any questions regarding this Order, please contact Mona Behrooz at 951-782-3237 or by email at [Mehrnoosh.Behrooz@waterboards.ca.gov](mailto:Mehrnoosh.Behrooz@waterboards.ca.gov).

Mr. Harris

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March 20, 2019

Sincerely,

A handwritten signature in black ink, appearing to read "Jayne Joy". The signature is fluid and cursive, with the first name "Jayne" being more prominent than the last name "Joy".

Jayne Joy  
Assistant Executive Officer

Enclosure: 13267 Order No. R8-2019-0044

cc: Shahla Farahnak – State Water Resources Control Board  
([Shahla.Farahnak@waterboards.ca.gov](mailto:Shahla.Farahnak@waterboards.ca.gov))  
Calvin Cox - SpecPro Professional Services ([Calvin.Cox@SpecProSvcs.com](mailto:Calvin.Cox@SpecProSvcs.com))

**DIRECTIVE FOR SOIL AND GROUNDWATER INVESTIGATION FOR  
THE DETERMINATION OF THE PRESENCE OF SELECTED PER- AND  
POLYFLUOROALKYL SUBSTANCES  
PURSUANT TO CALIFORNIA WATER CODE SECTION 13267  
ORDER NO. R8-2019-0044**

Pursuant to Water Code section 13267, the Santa Ana Regional Water Quality Control Board (Regional 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 \$5,000 per day for each day in which the violation occurs.

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

**I. BACKGROUND**

**A. WHAT ARE PFAS?**

PFAS is a family of more than 3,000 synthetic and mostly unregulated chemicals that have been produced since the mid-1900s. The PFAS compounds have very different physical and chemical properties. Some PFAS compounds are mobile, persistent, and bioaccumulative such as two contaminants of emerging concern, perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) that have been produced in the largest amounts within the United States.

PFAS are manufactured globally and have been used in the production of a wide range of industrial and household products. PFAS are found in many products such as dental floss, non-stick cookware, food packaging materials, non-stick products (e.g., Teflon™), waterproof and water repellent textiles, water repellent furniture, carpet, polishes, waxes, paints, cleaning products, medical garments, and fire-fighting foams (Aqueous Film-Forming Foams or AFFF). PFAS are used in the Aerospace, Automotive, Chemical, Electronics, Metal Coatings and Plating, and Textiles industries due to their friction-reducing characteristics. Potential firefighting sources of PFAS include airports and aviation facilities, military bases and training centers, petroleum refineries and terminals, 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 United States Environmental Protection Agency (U.S. EPA) website at: <https://www.epa.gov/pfas>.

WILLIAM RUH, CHAIR | HOPE SMYTHE, EXECUTIVE OFFICER

3737 Main St., Suite 500, Riverside, CA 92501 | [www.waterboards.ca.gov/santaana](http://www.waterboards.ca.gov/santaana)

People are exposed to PFOS and PFOA 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 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).”*

Please see U.S. EPA Technical Note for more information:

[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)

## **B. WHICH PFAS?**

Due to analytical limitations, the focus of this order is on 23 main analytes including specific PFOA and PFOS with the additional analytes per the provisions listed in **Attachment 2**. The PFAS analyte list is not exhaustive but is intended to serve as a minimum requirement for sampling and analysis pursuant to this Order. Some laboratories may be capable of analyzing additional PFAS that are not included on the list.

## **C. WHY IS THIS ACTIVITY REQUIRED?**

The Regional Water Board is charged with the protection of the beneficial uses of water in California, including water used or intended for use as drinking water. If PFAS were used, or materials suspected of containing PFAS were disposed of at your facility, field investigation and submittal of technical reports are required to evaluate the presence of PFAS. This is part of a statewide effort to determine whether the groundwater is impacted by PFAS and obtain a preliminary understanding of specific PFAS concentrations at facilities. We have directed, and intend to continue directing other dischargers identified as potential PFAS sources in the Santa Ana Region to perform PFAS testing. We will evaluate the data collected and make informed decisions in implementing appropriate regulatory action, in anticipation of emerging regulatory standards for PFAS.

In May 2016, the United States Environmental Protection Agency (U.S. EPA) established a cumulative Health Advisory Levels of 70 parts per trillion (ppt), (0.07 micrograms per liter ( $\mu\text{g/L}$ )) for PFOA and 70 ppt for PFOS. These concentrations are now considered a screening level. For more information on these advisories see U.S.

EPA's website at: <https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos>

Additionally, in July 2018, the State Water Resources Control Board's Division of Drinking Water (DDW) issued drinking water notification levels for PFOS and PFOA at 13 ppt and 14 ppt, respectively, per recommendations from California's Office of Environmental Health Hazard Assessment (OEHHA). DDW requires a combined PFOS/PFOA response level of 70 ppt. More information on notification levels for PFAS compounds can be found at:  
[https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/PFOA\\_PFOS.html](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/PFOA_PFOS.html)

California 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 investigations to determine the presence of PFAS in and near waters that could be used for drinking water purposes.

Additional justification supporting the need for the investigation is included in **Attachment 2**.

## II. WATER CODE SECTION 13267 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."*

The release of PFAS into the environment or the disposal of wastes containing PFAS constitutes a discharge of waste as defined in Water Code section 13050(d).

Pursuant to this authority, **you are hereby ordered to submit technical reports as identified in Attachment 2**. Additional information regarding requirements for submitting technical reports under Section 13267 of the Water Code is included as **Attachment 3**.

### **III. COST AND BENEFIT OF TECHNICAL REPORTS**

You are receiving this investigative order because your facility has accepted, stored, or used materials that may contain PFAS. Because of the use of PFAS in the aerospace industry, you are receiving an investigative order to produce data that will confirm whether your facility has disposed of wastes that contain specific PFAS. The current investigative order is part of an effort to determine whether nearby groundwater is impacted by PFAS. There is an option to respond to the order with information that PFAS (or AFFF), required by federal law to be used in aircraft rescue and firefighting services) were never used, stored, or disposed of at your facility. The statements must be submitted under penalty of perjury, and supported by appropriate evidence.

If PFAS and/or AFFFs were used at your facility, the order requires submission of a technical report for site investigation of PFAS impacts. Further investigation may be necessary depending on the initial PFAS concentrations found. The information sought by this order bears a reasonable relationship to the benefit to be gained because it is appropriately limited to facilities where the subject constituent is required by law to be used, and additional work is necessary only if PFAS were used, stored, and/or disposed of at your facility. The order is therefore iterative in nature, depending on facility use and sampling results. The cost for the preliminary investigation and work plan bears a reasonable relationship to the benefit of determining any impacts to the environment of PFAS use, including environmental harm and contamination of the public drinking water supply. The investigation required by this order will determine appropriate corrective action.

### **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.

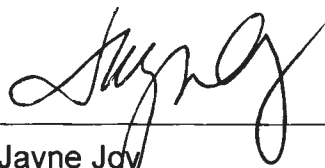
### **V. PENALTIES**

California 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.

#### **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, [NAME], certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision, in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*



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Jayne Joy  
Assistant Executive Officer

**ATTACHMENTS:**

**Attachment 1 - List of Airports**

**Attachment 2 - Technical Report Requirements & Questionnaire**

**Attachment 3 - Fact Sheet – Requirements for Submitting Technical Reports  
under Section 13267 of the California Water Code**

**Attachment 4- List of Laboratories**

**ATTACHMENT 1  
LIST OF AIRPORT FACILITIES**

CALIFORNIA WATER CODE SECTION 13267 ORDER FOR THE DETERMINATION OF THE PRESENCE OF SELECTED PER-  
AND POLYFLUOROALKYL SUBSTANCES

AIRPORTS CERTIFIED FOR AQUEOUS FILM FORMING FOAM (AFFF) USE

<b>FACILITY NAME<sup>1</sup> (AIRPORT ID)</b>	<b>GEOTRACKER GLOBAL ID</b>	<b>PROPERTY ADDRESS</b>	<b>OWNER<sup>1</sup></b>
JACK MC NAMARA FIELD (CEC)	T10000012761	150 DALE RUPERT RD CRESCENT CITY, CA 95531	BORDER COAST REGIONAL ARPT AUTH 150 DALE RUPERT ROAD CRESCENT CITY, CA 95531
CALIFORNIA REDWOOD COAST-HUMBOLDT COUNTY (ACV)	T10000012762	3561 BOEING AVE. MCKINLEYVILLE, CA 95519	HUMBOLDT COUNTY 1106 SECOND ST EUREKA, CA 95501
CHARLES M SCHULZ - SONOMA COUNTY (STS)	T10000012763	2290 AIRPORT BLVD SANTA ROSA, CA 95403	SONOMA COUNTY 2290 AIRPORT BLVD SANTA ROSA, CA 95403
METROPOLITAN OAKLAND INTL (OAK)	T10000012764	1 Airport Dr, OAKLAND, CA 94621	PORT OF OAKLAND 530 WATER ST. OAKLAND, CA 94607
BUCHANAN FIELD (CCR)	T1000001276	550 SALLY RIDE DR. CONCORD, CA 94520	CONTRA COSTA COUNTY 550 SALLY RIDE DR. CONCORD, CA 94520
SAN FRANCISCO INTL (SFO)	T10000012790	SAN FRANCISCO, CA 94128	CITY & COUNTY OF SAN FRANCISCO PO BOX 8097 SAN FRANCISCO, CA 94128
NORMAN Y MINETA SAN JOSE INTL (SJC)	T10000012766	1701 AIRPORT BLVD., SUITE B-1130 SAN JOSE, CA 95110- 1206	CITY OF SAN JOSE 200 E. SANTA CLARA STREET SAN JOSE, CA 95113
MONTEREY RGNL (MRY)	T10000012767	200 FRED KANE DR., SUITE 200 MONTEREY, CA 93940	MONTEREY PENIN ARPT DIST 200 FRED KANE DR., SUITE 200 MONTEREY, CA 93940



<b>FACILITY NAME<sup>1</sup> (AIRPORT ID)</b>	<b>GEOTRACKER GLOBAL ID</b>	<b>PROPERTY ADDRESS</b>	<b>OWNER<sup>1</sup></b>
SAN LUIS COUNTY RGNL (SBP)	T10000012768	975 AIRPORT DRIVE, SUITE 1 SAN LUIS OBISPO, CA 93401	SAN LUIS OBISPO COUNTY COUNTY GOVERNMENT CENTER SAN LUIS OBISPO, CA 93408
SANTA BARBARA MUNI (SBA)	T10000012769	601 FIRESTONE RD GOLETA, CA 93117	CITY OF SANTA BARBARA CITY HALL SANTA BARBARA, CA 93101
SANTA MARIA PUB/CAPT G ALLAN HANCOCK FLD (SMX)	T10000012770	3217 TERMINAL DR SANTA MARIA, CA 93455	SANTA MARIA PUBLIC APT DIST 3217 TERMINAL DR SANTA MARIA, CA 93455
BOB HOPE (BUR)	T10000012771	2627 HOLLYWOOD WAY BURBANK, CA 91505	BURBANK-GLENDALE-PASADENA APT 2627 HOLLYWOOD WAY BURBANK, CA 91505
LONG BEACH /DAUGHERTY FIELD/ (LGB)	T10000012772	4100 DONALD DOUGLAS DR LONG BEACH, CA 90808	CITY OF LONG BEACH CITY HALL 333 W. OCEAN LONG BEACH, CA 90802
LOS ANGELES INTL (LAX)	T10000012773	ONE WORLD WAY LOS ANGELES, CA 90009	CITY OF LOS ANGELES 1 WORLD WAY BOX 92216 LOS ANGELES, CA 90009-2216
OXNARD (OXR)	T10000012774	2889 W 5TH ST OXNARD, CA 93030	COUNTY OF VENTURA 555 AIRPORT WAY CAMARILLO, CA 93010
CHICO MUNI (CIC)	T10000012788	150 Airpark Blvd CHICO, CA 95927	CITY OF CHICO PO BOX 3420 CHICO, CA 95927
FRESNO YOSEMITE INTL (FAT)	T10000012775	4995 E CLINTON WAY FRESNO, CA 93727	CITY OF FRESNO 4995 E CLINTON WAY FRESNO, CA 93727

<b>FACILITY NAME<sup>1</sup> (AIRPORT ID)</b>	<b>GEOTRACKER GLOBAL ID</b>	<b>PROPERTY ADDRESS</b>	<b>OWNER<sup>1</sup></b>
MEADOWS FIELD (BFL)	T10000012776	3701 WINGS WAY, #300 BAKERSFIELD, CA 93308	COUNTY OF KERN DEPT OF ARPTS, 3701 WINGS WAY, #300, 3701 WINGS WAY, SUITE 300 BAKERSFIELD, CA 93308
SACRAMENTO INTL (SMF)	T10000012777	6900 AIRPORT BLVD SACRAMENTO, CA 95837	COUNTY OF SACRAMENTO 6900 AIRPORT BLVD SACRAMENTO, CA 95837
STOCKTON METROPOLITAN (SCK)	T10000012778	5000 S. AIRPORT WAY ROOM 202 STOCKTON, CA 95206	COUNTY OF SAN JOAQUIN 5000 S AIRPORT WAY STOCKTON, CA 95206
REDDING MUNI (RDD)	T10000012779	REDDING MUNI AIRPORT, 6751 WOODRUM CIRCLE SUITE 200 REDDING, CA 96002	CITY OF REDDING AIRPORTS DIVISION, 6751 WOODRUM CIRCLE, #200 REDDING, CA 96002-6071
MAMMOTH YOSEMITE (MMH)	T10000012789	1300 Airport Road MAMMOTH LAKES, CA 93546	TOWN OF MAMMOTH LAKES 1300 AIRPORT ROAD MAMMOTH LAKES, CA 93546 760-934-3813
SOUTHERN CALIFORNIA LOGISTICS (VCV)	T10000012780	18374 PHANTOM WEST VICTORVILLE, CA 92394	SOUTHERN CA LOGISTICS ARPT AUTH 18374 PHANTOM VICTORVILLE, CA 92394
IMPERIAL COUNTY (IPL)	T10000012781	1099 AIRPORT ROAD IMPERIAL, CA 92251	IMPERIAL COUNTY 1099 AIRPORT ROAD IMPERIAL, CA 92251
PALM SPRINGS INTL (PSP)	T10000012782	3400 E. TAHQUITZ- CANYON WAY, SUITE OFC PALM SPRINGS, CA 92262	CITY OF PALM SPRINGS 3400 E. TAHQUITZ CANYON WAY PALM SPRINGS, CA 92262

<b>FACILITY NAME<sup>1</sup> (AIRPORT ID)</b>	<b>GEOTRACKER GLOBAL ID</b>	<b>PROPERTY ADDRESS</b>	<b>OWNER<sup>1</sup></b>
JOHN WAYNE AIRPORT- ORANGE COUNTY (SNA)	T10000012783	3160 AIRWAY AVE COSTA MESA, CA 92626	ORANGE COUNTY 3160 AIRWAY AVENUE COSTA MESA, CA 92626
ONTARIO INTL (ONT)	T10000012784	1923 EAST AVION STREET ONTARIO, CA 91761	ONTARIO INTL AIRPORT AUTHORITY 1923 EAST AVION STREET ONTARIO, CA 91761
SAN BERNARDINO INTL (SBD)	T10000012785	105 N LELAND NORTON WAY SUITE 7 SAN BERNARDINO, CA 92408	SAN BERNARDINO INTL AIRPORT AUTH 1601 E 3RD STREET SAN BERNARDINO, CA 92408
MC CLELLAN-PALOMAR (CRQ)	T10000012786	2192 PALOMAR AIRPORT ROAD CARLSBAD, CA 92011- 4409	COUNTY OF SAN DIEGO 1960 JOE CROSSON DRIVE EL CAJON, CA 92020-1235
SAN DIEGO INTL (SAN)	T10000012787	3225 N HARBOR DRIVE SAN DIEGO, CA 92101- 1022	SAN DIEGO CNTY REG ARPT AUTHORITY 3225 N HARBOR DRIVE SAN DIEGO, CA 92101-1022

<sup>1</sup> Facility name and owner are those listed on the U.S. Department of Transportation Federal Aviation Administration Airport Master Record (FAA FORM 5010-1) and were obtained from <https://www.gcr1.com/5010WEB/>.

**ATTACHMENT 2**  
**TECHNICAL REPORT REQUIREMENTS AND QUESTIONNAIRE**  
**FOR AIRPORTS**

WATER CODE SECTION 13267 ORDER No. R8-2019-0044 FOR THE  
DETERMINATION OF THE PRESENCE OF SELECTED PER- AND  
POLYFLUOROALKYL SUBSTANCES

**Contents:**

- A. Justification for the Need for Technical Reports*
- B. Technical Report Requirements*
- C. Airport Operator Questionnaire*

**A. JUSTIFICATION FOR THE NEED FOR TECHNICAL REPORTS**

As indicated by the Federal Aviation Administration (FAA)<sup>1</sup>, all Title 14, Code of Federal Regulations, Part 139 certified airports are required to provide aircraft rescue and firefighting services. Your facility has been certified by the FAA to use AFFF compounds. If AFFF or other PFAS compounds were disposed of, discharged to, spilled, or released in any way to lands of your facility, a work plan is required for the preliminary investigation of soil and groundwater impacts (Section B). Santa Ana Regional Water Quality Control Board seeks to determine whether the groundwater and/or soil at your location is impacted by PFAS and obtain a preliminary understanding of PFAS concentrations in the soil and/or groundwater at your facility.

We intend to direct other dischargers identified as potential PFAS sources in the state to perform PFAS testing. We will evaluate the data collected to make informed decisions in implementing appropriate regulatory action, in anticipation of emerging regulatory standards for PFAS.

**B. TECHNICAL REPORT REQUIREMENTS**

**Work Plan**

You are required to submit a work plan for a preliminary site investigation of PFAS impacts at your facility to the Board no later than 60 days following the receipt of this Order. This attachment provides specific requirements to include in the Work Plan.

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<sup>1</sup> [https://www.faa.gov/airports/airport\\_safety/part139\\_cert/](https://www.faa.gov/airports/airport_safety/part139_cert/)

**At a minimum, provide the following in your Work Plan:**

1. A site map showing the proposed sampling locations, and the locations where PFAS materials have been (or are suspected of being) discharged, spilled, disposed of, released in any way, or applied to land including firefighting training areas, crash sites, and spills due to materials handling.
2. Identify sensitive receptors such as municipal supply wells, domestic wells, and/or surface water bodies within a 1-mile radius of all suspected source areas.
3. A description of the proposed surface and subsurface soil sampling locations and depths to determine presence of specific PFAS where there were any known or suspected storage, spill, application or other discharge(s) of these compounds to the land.
4. Proposed representative groundwater sample locations in proximity to a suspected source area. Existing monitoring wells for your facility may be used if they are located downgradient and in close proximity to PFAS source(s) and the groundwater samples would be representative of groundwater conditions. If groundwater gradient is unknown, at a minimum, three groundwater samples must be collected around the source area(s). If you intend to install groundwater monitoring wells for the purpose of this investigation, the design of the monitoring well should be proposed in the Work Plan.
5. Sampling and Analysis Plan for compounds and parameters specified in Tables 1 and 2 that includes quality assurance and quality control procedures necessary to ensure valid and representative data is 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, sample preservation and quantities for sampling selected 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 at: [https://www.waterboards.ca.gov/water\\_issues/programs/pfas/](https://www.waterboards.ca.gov/water_issues/programs/pfas/).
6. Reporting limits for selected PFAS.
7. Signature, professional stamp, and contact information for the California-licensed Professional Geologist or Professional Engineer acting in responsible charge for the content of the Work Plan.

The Work Plan will be subject to Regional Board staff approval.

## Final Report

A final sampling and analysis report, including at least the following information, must be submitted **no later than 90 days** following our acceptance of the Work Plan:

- a) A description of the sampling activities;
- b) A summary table of analytical results;
- c) A copy of the Chain of Custody;
- d) A copy of the field sampling log;
- e) A copy of boring logs and any temporary/permanent monitoring well construction details
- f) A copy of the site map showing the sampling/monitoring locations; and
- g) A copy of laboratory analytical results of the monitored media.

## Questionnaire

If you 1) have not discharged, disposed of, spilled, or released in any way, AFFF or other PFAS containing materials to land at your facility, or 2) have already conducted sampling for these constituents in compliance with the minimum work plan requirements listed below, please complete the questionnaire (Section C) with relevant information supporting your response and return to the Regional Water Board specified in the Order cover letter **no later than 30 days following the date of this Order.**

## Report Submittal

Reports must be submitted in a searchable electronic format, with transmittal letter, text, tables, figures, laboratory analytical data, and appendices in Portable Document Format (PDF) format (one PDF for the entire report) as well as in electronic data deliverable (EDD) format. The Questionnaire, Work Plan, Final Report, and Analytical Reports and EDD must be uploaded into GeoTracker via the Electronic Submittal of Information (ESI) Portal, as stipulated by California State law. GeoTracker ESI guidance, general information and Help Desk assistance can be on the ESI homepage at:

[https://www.waterboards.ca.gov/water\\_issues/programs/ust/electronic\\_submittal/](https://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/)

The analytical laboratory must be certified by the California Environmental Laboratory Accreditation Program (ELAP) to perform the analytical method for PFAS Using Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS) With Isotope Dilution or Internal Standard Quantification in Matrices Other Than Drinking Water provided in Table B-15 of the Department of Defense's (DoD) Quality Systems Manual (QSM), dated 2017, version 5.1 or later. The laboratory must have the capacity to quantify the target PFAS analytes listed in Table 1, and must be capable of achieving the quality control/quality assurance requirements specified in Table B-15 of the DoD QSM, version 5.1 or later. DoD's QSM version 5.1 can be found at:

<https://www.denix.osd.mil/edqw/documents/documents/qsm-version-5-1-final/> as well as on the State Water Board's PFAS informational website:

[https://www.waterboards.ca.gov/water\\_issues/programs/pfas/](https://www.waterboards.ca.gov/water_issues/programs/pfas/). A list of laboratories that are certified through the ELAP can be found on the State Water Board ELAP webpage: [https://www.waterboards.ca.gov/drinking\\_water/certlic/labs/](https://www.waterboards.ca.gov/drinking_water/certlic/labs/). In addition, a list of some of the laboratories that are certified for non-drinking water media analysis for PFAS is included in Attachment 4. Also, for the general parameters listed in Table 2, the method of analysis shall be appropriate for the expected concentrations.

**TABLE 1. PFAS Analytes Subject to Analysis**

Chemical Name	Abbreviation	Chemical Abstracts Service (CAS) No.
Perfluorooctane sulfonic acid	PFOS	1763-23-1
Perfluoroundecanoic acid	PFUnDA	2058-94-8
N-Methyl perfluorooctane sulfonamidoacetic acid	NMeFOSAA	2355-31-9
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluoropentane sulfonic acid	PFPeS	2706-91-4
6:2 Fluorotelomer sulfonic acid	6:2 FTS	27619-97-2
N-Ethyl perfluorooctane sulfonamidoacetic acid	NEtFOSAA	2991-50-6
Perfluorohexanoic acid	PFHxA	307-24-4
1,0-Perfluorododecanoic acid	PFDODA	307-55-1
Perfluorooctanoic acid	PFOA	335-67-1
Perfluorodecanoic acid	PFDA	335-76-2
Perfluorodecane sulfonic acid	PFDS	335-77-3
Perfluorohexane sulfonic acid	PFHxS	355-46-4
Perfluorobutanoic acid	PFBA	375-22-4
Perfluorobutane sulfonic acid	PFBS	375-73-5
Perfluoroheptanoic acid	PFHpA	375-85-9
Perfluoroheptane sulfonic acid	PFHpS	375-92-8
Perfluorononanoic acid	PFNA	375-95-1
Perfluorotetradecanoic acid	PFTeDA	376-06-7
8:2 Fluorotelomer sulfonic acid	8:2 FTS	39108-34-4
Perfluorononanesulfonic acid	PFNS	8789-57-2
Perfluorotridecanoic acid	PFTrDA	72629-94-8
Perfluorooctanesulfonamide	FOSA	754-91-6
4:2 Fluorotelomer sulfonic acid	4:2 FTS	757124-72-4
N-Methyl perfluorooctane sulfonamidoethanol	MeFOSE	24448-09-7
N-Methyl perfluorooctane sulfonamide	MeFOSA	31506-32-8
4,4,5,5,6,6,6-Heptafluorohexanoic Acid	3:3 FTCA	356-02-5
2H,2H,3H,3H-Perfluorodecanoic acid	7:3 FTCA	812-70-4
N-Ethyl perfluorooctane sulfonamide	EtFOSA	4151-50-2
Perfluorohexadecanoic acid	PFHxDA	67905-19-5
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid	HFPO-DA	13252-13-6
10:2 Fluorotelomer sulfonic acid	10:2 FTS	120226-60-0
2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy) propanoic Acid	HFPA-DA	13252-13-6
Perfluorooctadecanoic acid	PFOcDA	16517-11-6
N-Ethyl perfluorooctane sulfonamidoethanol	EtFOSE	1691-99-2

Perfluoro(2-((6-chlorohexyl)oxy)ethanesulfonic acid)	9CI-PF3ONS	756426-58-1
2-[(8-Chloro-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-hexadecafluorooctyl)oxy]-1,1,2,2-tetrafluoroethanesulfonic acid	11CI-PF3OUdS	763051-92-9
2H,2H,3H,3H-Perfluorooctanoic Acid	5:3 FTCA	914637-49-3
4,8-Dioxa-3H-perfluorononanoic acid	Adona	919005-14-4
<b>Note:</b> Only the 24 analytes included in EPA target PFAS list and without highlight are required to be analyzed as part of this Order. The highlighted analytes are included in some but not all lists provided by accredited laboratories and are encouraged to be analyzed as part of this effort.		

**TABLE 2**  
**Field Parameters and General Chemistry for Groundwater**

Parameter	Units
<b>Field Parameters</b>	
Depth to Groundwater	Feet, bgs
Temperature	Degrees C
Electrical Conductivity	µmhos/cm
pH	units
Turbidity	NTU
<b>General Chemistry</b>	
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
<b>Notes:</b> bgs – below ground surface C – Celsius mg/L – milligrams NTU – nephelometric turbidity units µmhos/cm – micromhos per centimeter	



**C. AIRPORT OPERATOR QUESTIONNAIRE**

Operator/Principal Name:	Title:		
Name of Facility:			
Facility's Address:			
City/County/State/Zip:			
Phone Number:	Fax:		
Email Address:			
<b>PER- AND POLY-FLUOROALKYL SUBSTANCES (PFAS) - CONSTITUENT SCREENING</b>			
1.	Have PFAS, including fire-fighting foams (i.e. Aqueous Film-Forming Foam [AFFF]), or any other PFAS compounds been used or stored at your facility?  <i>If yes, please attach additional sheets to describe where they were/are stored, handling processes utilized, and how long you have used/stored those PFAS at your facility.</i>	<input type="checkbox"/> YES	<input type="checkbox"/> NO
2.	Have PFAS been discharged, spilled, disposed of, released in any way, or applied to land at your facility?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
3.	If PFAS were discharged, spilled, disposed of, released in any way, or applied to land at your facility, have any investigations to identify the impacts of PFAS to soil and groundwater been conducted at your facility?  <i>If yes, please attach additional sheets to describe where and when PFAS were discharged, spilled, disposed of, released in any way, or applied to land, the quantity, the method of analysis, a summary table of analytical results, as well as the laboratory analytical report.</i>	<input type="checkbox"/> YES	<input type="checkbox"/> NO
<b>CERTIFICATION</b>			
<p><b>This form is only required to be completed if your facility did not discharge, spill, dispose, release in any way, or apply PFAS compounds to land, or you have already conducted sampling for PFAS compounds. This form and supporting documentation must be provided to the appropriate Regional Water Board and uploaded to GeoTracker by the date specified in the Order.</b></p> <p>I, _____, 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.</p>			
Signature:			
Title:			
Date:			

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Santa Ana Regional Water Quality Control Board

**ATTACHMENT 3**

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

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**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 13267<sup>1</sup> 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 board, the state board determines that it will not duplicate the efforts of the regional board.

**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. 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 \$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.

**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.

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<sup>1</sup> All code sections referenced herein can be found by going to [www.leginfo.ca.gov](http://www.leginfo.ca.gov).

### ATTACHMENT 4

LC/MS/MS with Isotop Dilution or Internal Standard Quantification for non-drinking water media (DoD QSM) <sup>1</sup>	Laboratory Name	State
Yes	Agriculture & Priority Pollutants Laboratories, Inc.	CA
Yes	Eurofins Lancaster Laboratories Environmental, LLC	PA
Yes	SGS North America, Inc. - Orlando	FL
Yes	Eurofins TestAmerica Sacramento	CA
Yes	Vista Analytical Lab	CA
Yes	ALS Environmental	WA
Yes	GEL Laboratories	SC
Yes	Microbac Laboratories, Inc.	OH
Yes	SGS North America Inc. - Dayton	NJ
Yes	Jupiter Environmental Labs, Inc.	FL
Yes	Battelle	MA

1. This list is not a complete list and does not constitute an endorsement of those firms on the list, nor is it a statement against any firm not on the list. Any certified laboratory per the provisions included in Attachment 2 may be used provided that the laboratory certification is included in the final report.
2. This list may be updated periodically to include additional laboratory certifications.

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<i>City, State, ZIP+4</i>	San Bernardino, CA 92408

PS Form 3800, August 2000

See Reverse for Instructions