
State Water Resources Control Board

**WATER CODE SECTIONS 13267 AND 13383 ORDER FOR THE
DETERMINATION OF THE PRESENCE OF PER- AND POLYFLUOROALKYL
SUBSTANCES AT CHROME PLATING FACILITIES**

ORDER WQ 2019-0045-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 \$5,000 per day for each day in which the violation occurs.

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

I. BACKGROUND

A. WHAT ARE PFAS?

PFAS is 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, and bioaccumulative. They are resistant to degradation in the environment and when degradation occurs, it often results in the formation of other PFAS compounds. The PFAS compounds have very different physical and chemical properties. Currently the key classes of concern are perfluoroalkyl sulfonic acids such as the long-chain perfluorooctanesulfonate (PFOS) and perfluorooctanoic acid (PFOA).

PFAS are manufactured globally and have been used in the production of a wide range of industrial and household products. Historically, fume suppressants used in chrome plating operations often contained PFOS as an active ingredient. Although PFOS-based fume suppressants have not been used in California since September 2016, these newer non-PFOS fume suppressants may contain other PFAS.

PFAS are also 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; AFFF). PFAS

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

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 the [United States Environmental Protection Agency \(U.S. EPA\) website](http://www.epa.gov/pfas) (www.epa.gov/pfas).

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 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](http://www.epa.gov/sites/production/files/2017-12/documents/ffrrofactsheet_contaminants_pfos_pfoa_11-20-17_508_0.pdf) (www.epa.gov/sites/production/files/2017-12/documents/ffrrofactsheet_contaminants_pfos_pfoa_11-20-17_508_0.pdf) for more information.

B. WHICH PFAS?

We are interested in all PFAS that exist in the environment. Due to analytical limitations, the focus of this order is on 38 PFAS analytes listed in **Attachment 2**. The PFAS analyte list is not exhaustive but is intended to serve as a minimum requirement for sampling pursuant to this Order. Some laboratories may be capable of analyzing additional PFAS that are not included on the list.

C. WHY IS THIS ACTIVITY REQUIRED?

The State Water Board and the Regional 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. This is part of a statewide effort to evaluate PFAS groundwater and surface water impacts and obtain a preliminary understanding of PFAS concentrations at facilities. The State Water Board 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, the United States Environmental Protection Agency (U.S. EPA) established drinking water 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 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 July 2018, the State Water 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 on the [DDW PFOA and PFOS website](http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/PFOA_PFOS) (www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/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 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 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 into the environment or the disposal of wastes containing PFAS constitutes a discharge of waste as defined in Water Code section 13050(d). The discharge of wastewater containing PFAS to a sanitary sewer system constitutes the introduction of pollutants into a publicly owned treatment works as described in Water Code sections 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.**

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 are estimated to be in the range of \$10,000 to \$30,000 for the stormwater and/or wastewater sampling. If soil and/or groundwater sampling is required, those 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 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 sources of PFAS, which EPA has determined may cause adverse health 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. 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, 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.”

10/4/19

Date



Eileen Sobeck
Executive Director

ATTACHMENTS:

Attachment 1 - List of Facilities

Attachment 2 - Technical Report Requirements & Questionnaire

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

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ATTACHMENT 1

LIST OF FACILITIES RECEIVING ORDER WQ 2019-0045-DWQ

Regional Board	Facility Name	Address	City	Zip	County	GeoTracker Global ID
North Coast	Abex Corporation - Remco Hydraulics	934 Main Street, South	Willits	95490	Mendocino	T0604593324
North Coast	Bromley Property	1500 Santa Rosa Avenue	Santa Rosa	95404	Sonoma	T0609791166
North Coast	Hewlett Packard Valley Site	1201 Piner Road	Santa Rosa	95403	Sonoma	T0609791161
San Francisco Bay	1255 Eastshore Highway (Former Hawkins Traffic Safety Supply)	1255 Eastshore Highway	Berkeley	94710	Alameda	T10000011080
San Francisco Bay	American Chrome	932 86th Ave	Oakland	94607	Alameda	SLT2O158262
San Francisco Bay	Babbitt Bearing Co Inc	1170 N 5th Street	San Jose	95112	Santa Clara	T10000013405
San Francisco Bay	Chromex (Toxic)	1400 Park	Emeryville	94608	Alameda	T06019703624
San Francisco Bay	E-D Coat Inc	715 4th St	Oakland	94607	Alameda	T10000013406
San Francisco Bay	Electro Coating Inc	1401/1421 Park Avenue	Emeryville	94608	Alameda	SL20254872
San Francisco Bay	Electro-Coatings Of California Inc	893 Carleton Street	Berkeley	94710	Alameda	SLT2O363253
San Francisco Bay	Esposito Plating Corp	2904 Chapman St	Oakland	94601	Alameda	T10000013407
San Francisco Bay	Fass Metals Company	818 Gertrude	Richmond	94801	Contra Costa	T10000013408
San Francisco Bay	Francis Plating Building	785 7th Street	Oakland	94607	Alameda	T10000007028
San Francisco Bay	Fryer Industries, Inc.	1073 34th Street	Oakland	94608	Alameda	T10000013409
San Francisco Bay	Global Plating, Inc	44620 Grimmer Blvd	Fremont	94538	Alameda	T10000013410
San Francisco Bay	Gold Seal Plating	3125 7th	Oakland	94601	Alameda	T10000013411
San Francisco Bay	Hammon Plating	855-890 Commercial Street	Palo Alto	94303	Santa Clara	T10000013412
San Francisco Bay	High Luster Metal Finishing	2466 American Avenue, Unit C	Hayward	94545	Alameda	T10000013416
San Francisco Bay	Johnson Plating Works Inc	2526 Telegraph Ave	Oakland	94612	Alameda	T10000013417
San Francisco Bay	Kliklok Corporation	2661 Spring Street	Redwood City	94063	San Mateo	T10000007986
San Francisco Bay	Oliver Wire And Plating Company	555 Montague Ave	San Leandro	94577	Alameda	SLT2O299190
San Francisco Bay	R & R Processing	1805 Little Orchard St	San Jose	95125	Santa Clara	T10000013418
San Francisco Bay	Rapid Plating	201 Goble Lane	San Jose	95124	Santa Clara	T10000008093
San Francisco Bay	Roll Technology West	900 Loveridge Road	Pittsburg	94565	Contra Costa	T10000013419
San Francisco Bay	SJ Valley Plating Inc	491 Perry Court	Santa Clara	95054	Santa Clara	T10000013420
San Francisco Bay	Specific Plating Co	936 Industrial Avenue	Palo Alto	94303	Santa Clara	T10000013421
San Francisco Bay	Teikuro Corp	31499 Hayman	Hayward	94544	Alameda	T10000013422
San Francisco Bay	Western Roto Engravers/WRE/Colortech	1225 6th St	Berkeley	94710	Alameda	SL20228846
Central Coast	Joe's Plating Shop	429 State St	Santa Barbara	93101	Santa Barbara	T10000012008
Central Coast	Whittaker Ordnance Inc.	2751 San Juan Road	Hollister	95023	San Benito	SL203161254
Los Angeles	A & Z Grinding Inc	1543 Nadeau Street	Los Angeles	90001	Los Angeles	T10000013423
Los Angeles	A2Z Plating	1467 S Sunol Dr	Los Angeles	90023	Los Angeles	T10000013424
Los Angeles	Aaa Plating & Inspection, Inc	424 Dixon St	Compton	90222	Los Angeles	T10000013425
Los Angeles	Acapulco Polishing Corp	524 E Euclid Ave	Compton	90222	Los Angeles	T10000013426
Los Angeles	Accu Chrome Plating Co Inc	115 W 154th St	Gardena	90248	Los Angeles	T10000013427
Los Angeles	Accurate Anodizing Inc	1801 El Segundo	Compton	90222	Los Angeles	T10000013428
Los Angeles	Accurate Plating Co	2811 Alcazar St	Los Angeles	90033	Los Angeles	T10000013429
Los Angeles	Aero Chrome Plating/Crown Chrome Plating	14660 Arminta St	Van Nuys	91402	Los Angeles	T10000013430

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Los Angeles	Aerodynamic Plating Company	13620-13629 South Saint Andrews Place	Gardena	90249-2415	Los Angeles	T10000013431
Los Angeles	A-H Plating Inc	1837 Victory Place	Burbank	91504	Los Angeles	SL603798588
Los Angeles	Aircraft X Ray Laboratories Inc	5216 Pacific Blvd	Huntington Park	90255	Los Angeles	T10000013432
Los Angeles	Alco Cad-Nickel Plating Corp	1400 Long Beach Avenue	Los Angeles	90021	Los Angeles	T10000013433
Los Angeles	All American Manufacturing Co	2201 E 51st St	Los Angeles	90058	Los Angeles	T10000013434
Los Angeles	Allfast Fastening Sys Inc	15200 Don Julian Rd	City Of Industry	91745	Los Angeles	T10000013435
Los Angeles	Allied Signal Inc-N Hollywood	11600 Sherman Way	N Hollywood	91605	Los Angeles	SL0002041900
Los Angeles	Alloy Processing	1900 W Walnut	Compton	90220	Los Angeles	T10000013436
Los Angeles	Anaplex Corporation	15447 Garfield Ave	Paramount	90723	Los Angeles	T10000013437
Los Angeles	Anchor Plating	1734 Tyler Avenue	South El Monte	91733	Los Angeles	T10000013438
Los Angeles	Anco Metal Improvement Co (Former)	417 West 164th Street	Carson	90248	Los Angeles	SL2041F1507
Los Angeles	Angele Garcia & Palma Ponce Dba Aluminum Processing	19019 Parthenia St	Northridge	91324	Los Angeles	T10000013439
Los Angeles	Angelus Plating Wks	1713 W 134th Street	Gardena	90249	Los Angeles	T10000013440
Los Angeles	Anodizing Industries Worth Facility	4677 Worth Street	Los Angeles	90063	Los Angeles	T10000013441
Los Angeles	Anodizing Industries	5222 Alhambra Ave	Los Angeles	90032-3403	Los Angeles	T10000013442
Los Angeles	Anodizing Industries Nadcap Facility	5160 Alhambra Avenue	Los Angeles	91132	Los Angeles	T10000013443
Los Angeles	Arbco Facility (Former)	7820 Gloria Ave	Van Nuys	91406	Los Angeles	SL2042K1539
Los Angeles	Artistic Silver Plating Inc	2344 Orange Ave	Signal Hill	90755-3532	Los Angeles	T10000013444
Los Angeles	Associated Plating	9636 Ann St	Santa Fe Springs	90670	Los Angeles	T10000013445
Los Angeles	Automotive Racing Product Inc	275 Quail Ct.	Santa Paula	93060	Ventura	T10000013446
Los Angeles	Aviation Repair Solutions Inc	1480 Canal Ave Suite A	Long Beach	90813	Los Angeles	T10000013447
Los Angeles	B & C Plating Co	1507 S Sunol Dr	Los Angeles	90023	Los Angeles	T10000013448
Los Angeles	Barken's Hard Chrome, Inc	239 E Greenleaf Blvd	Compton	90220-4913	Los Angeles	SL204CP1893
Los Angeles	Barry Ave Plating Co Inc	2210 Barry Ave	Los Angeles	90064	Los Angeles	T10000013449
Los Angeles	Bowman Field, Inc , Chrome Nickel Platin	2820 E Martin L King Jr Blvd	Lynwood	90262	Los Angeles	T10000013450
Los Angeles	Bowman Plating Co Inc	2631 E 126th St	Compton	90222	Los Angeles	T10000013451
Los Angeles	Brite Plating Co Inc	1313 Mirasol St	Los Angeles	90023	Los Angeles	T10000013452
Los Angeles	Bronzeway Plating Corp	3432 East 15th St.	Los Angeles	90023	Los Angeles	T10000013453
Los Angeles	Brothers Plating	334 S Motor Avenue	Azusa	91702-3229	Los Angeles	T10000013454
Los Angeles	C & C Metal Finishers	207 Puente Ave.	City Of Industry	91746	Los Angeles	SL603798558
Los Angeles	C&M Gold Plating, Adalberto Coldivar C	948 W Industrial St	Azusa	91702	Los Angeles	T10000013455
Los Angeles	Cal Electroplating Inc	3510 E Pico Blvd	Los Angeles	90023	Los Angeles	T10000013456
Los Angeles	California Technical Plating	11533 Bradley Avenue	San Fernando	91340	Los Angeles	T10000013457
Los Angeles	Cal-Tron Plating Inc	11919 Rivera Road	Santa Fe Springs	90670	Los Angeles	T10000013458
Los Angeles	Carter Plating Inc	1842 N Keystone St.	Burbank	91504	Los Angeles	T10000013459
Los Angeles	Cemcoat Inc	4928 W Jefferson Blvd	Los Angeles	90016-3923	Los Angeles	T10000013460
Los Angeles	Christensen Plating Wks Inc	2455 E 52nd Street	Vernon	90058	Los Angeles	T10000013461
Los Angeles	Chromal Plating & Grinding Co.	1748 Workman St	Los Angeles	90031	Los Angeles	SL0603764270
Los Angeles	Chromplate	1127 W Hillcrest Blvd	Inglewood	90301	Los Angeles	T10000013463

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Los Angeles	Connector Plating/Avnex Surface Finishing	327 West 132rd Street	Los Angeles	90061	Los Angeles	T10000008608
Los Angeles	Connell Processing Inc	3080-3094 N Avon St	Burbank	91504	Los Angeles	T10000013464
Los Angeles	Courtaulds Aerospace	5430 San Fernando Rd.	Glendale	91209	Los Angeles	SL603799127
Los Angeles	Crown City Plating	4350 Temple City Blvd	El Monte	91731	Los Angeles	T10000013465
Los Angeles	Decore Plating	434 W 164th St	Carson	90248	Los Angeles	T10000013466
Los Angeles	Deutsch Fastener Facility	3969 Paramount Blvd	Lakewood	90712	Los Angeles	SL204311549
Los Angeles	Domar Precision Inc	5250 Southern Ave	South Gate	90280	Los Angeles	T10000013467
Los Angeles	Ducks Metal Polishing	2668 Martin Luther King Jr Blvd	Lynwood	90262-1742	Los Angeles	T10000013468
Los Angeles	Ducommun Aerostructures Inc	801 Royal Oaks Drive	Monrovia	91016	Los Angeles	T10000013469
Los Angeles	Dyanco, Inc.	1850 So Belcroft Ave	South El Monte	91733	Los Angeles	T10000013470
Los Angeles	E M E Inc	431 E Oaks St	Compton	90221	Los Angeles	T10000013471
Los Angeles	El Monte Plating Co	11409 Stewart St	El Monte	91731	Los Angeles	T10000013472
Los Angeles	Electrolizing Inc	1947 Hooper Ave	Los Angeles	90011	Los Angeles	T10000013473
Los Angeles	Electronic Chrome And Grinding Facility	9128-9132 Dice Road	Santa Fe Springs	90670	Los Angeles	T10000006542
Los Angeles	Elite Auto Body	649 Alderton Avenue	City Of Industry	91744	Los Angeles	T10000013474
Los Angeles	Elite Metal Finishing (Oxnard Facility)	540 Spectrum Circle	Oxnard	93030	Ventura	T10000013475
Los Angeles	Engineered Applications Inc	4727 E 49th Street	Vernon	90058	Los Angeles	T10000013476
Los Angeles	Excello Plating Co., Inc	4057 Goodwin Ave.	Los Angeles	90039	Los Angeles	SL603799122
Los Angeles	Fairchild Space - Manhattan Beach	1800 West Rosecrans	Manhattan Beach	90266	Los Angeles	SL184091392
Los Angeles	Faith Plating	7141 and 7155 Santa Monica Blvd.	West Hollywood	90046	Los Angeles	T10000013477
Los Angeles	Fine Quality Metal Finishing Co	1640-17 Daisy Ave	Long Beach	90813	Los Angeles	T10000013478
Los Angeles	Former Ace Plating	719 Towne Avenue	Los Angeles	90021	Los Angeles	T10000004814
Los Angeles	Former Amp-Matrix Facility	335-455 Maple Avenue	Torrance	90503	Los Angeles	SL204811687
Los Angeles	Former Astro Chrome & Polishing Corp	15236 Erwin St	Van Nuys	91411	Los Angeles	T10000013479
Los Angeles	Former Aviall Services Inc.	3111 N. Kenwood St.	Burbank	91505	Los Angeles	SL603798596
Los Angeles	Former Renu Plating Company Inc/ AKA Proposed Nevin Park Site	1531 East 32nd Street	Los Angeles	90011	Los Angeles	T10000013481
Los Angeles	Former Sigma Plating Company, Inc. (Stcdara, Llc)	1040 South Otterbein Avenue	La Puente	91748	Los Angeles	SL603798678
Los Angeles	Former Southern California Plating Company	3434-3440 N. San Fernando Road	Los Angeles	90065	Los Angeles	T10000010208
Los Angeles	Foss Plating Co., Inc.	8140 Secura Way	Santa Fe Springs	90670	Los Angeles	T10000013482
Los Angeles	Galaxy Place	3430 Galaxy Pl	Oxnard	93030	Ventura	T10000013483
Los Angeles	GCG Corporation	608 Ruberta Ave	Glendale	91201	Los Angeles	T10000013484
Los Angeles	Gene's Plating Works	3498 E. 14th Street	Los Angeles	90023	Los Angeles	T10000013485
Los Angeles	Grana Industrial Finishes	3524 E 14th St	Los Angeles	90023	Los Angeles	T10000013486
Los Angeles	Greenfield Trading Co.	10180 E. Valley Boulevard	El Monte	91731-2361	Los Angeles	SL603798572
Los Angeles	GSP Acquisition Corp/Gardena Specialized	16520 S Figueroa St	Gardena	90248	Los Angeles	T10000013487
Los Angeles	Hawker Pacific Aerospace	11240 Sherman Way	Sun Valley	91352	Los Angeles	T10000013489
Los Angeles	Hi-Shear Corporation	2600 Sky Park Drive	Torrance	90505	Los Angeles	SL204231523

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Los Angeles	Home Depot - ITT Aerospace Controls-Div.	1200 South Flower Street	Burbank	91502	Los Angeles	SL0611172141
Los Angeles	Hydroform Usa	2848 E 208th St	Carson	90810	Los Angeles	T10000013490
Los Angeles	Ibarras Metal Polishing/D&R Chrome	6001 Maywood Avenue Unit J	Huntington Park	90255	Los Angeles	T10000013491
Los Angeles	Industrial Zinc Plating	3200 East 29th Street	Long Beach	90806	Los Angeles	T10000013492
Los Angeles	International Die Casting	14733 Avalon	Rosewood	90248	Los Angeles	T10000013493
Los Angeles	Jan-Kens Enameling Co Inc	715 E Cypress Ave	Monrovia	91016	Los Angeles	T10000013495
Los Angeles	Jenco Plating Inc	9536 Rush St	South El Monte	91733	Los Angeles	T10000013496
Los Angeles	K L Anodizing Corporation	1200 S Victory Blvd	Burbank	91502	Los Angeles	T10000013497
Los Angeles	Lee Fletcher Enterprise Corporation	2449 E 56 Street	Huntington Park	90255	Los Angeles	T10000013498
Los Angeles	LMDD Enter. Inc., dba Dixon Hard Chrome	11645 Pendleton St	Sun Valley	91352	Los Angeles	T10000010400
Los Angeles	LSG Industries Inc/PCG Industries	15524 Minnesota Ave	Paramount	90723	Los Angeles	T10000013500
Los Angeles	Lubeco Inc	6859 Downey Ave	Long Beach	90805	Los Angeles	T10000013501
Los Angeles	Maxima Enterprises, Inc.	23920 S Vermont	Harbor City	90710	Los Angeles	T10000013502
Los Angeles	McDonnell Douglas/Boeing Company	2401 E. Wardlow Road, M/C C054-0428	Long Beach	90807	Los Angeles	T10000013503
Los Angeles	Metal Finishing Marketers Inc	1401 Mirasol St	Los Angeles	90023	Los Angeles	T10000013504
Los Angeles	Metal Surfaces Inc	6048-60 Shull St	Bell Gardens	90201	Los Angeles	T10000013505
Los Angeles	MJ Plating Industrial Building	18141 Napa Street	Northridge	91325	Los Angeles	T10000013506
Los Angeles	Modern Plating Company	5400 104th Street	Los Angeles	90045	Los Angeles	T10000013507
Los Angeles	Monitor Polishing And Plating, Inc	8050 San Fernando Rd	Sun Valley	91352	Los Angeles	T10000013508
Los Angeles	Moog, Inc (Hard, Ano)	20263 S Western Ave	Torrance	90501	Los Angeles	T10000013509
Los Angeles	Morrell's Electro Plating, Inc	432 E Euclid Ave	Compton	90222	Los Angeles	T10000013510
Los Angeles	Multichrome Co Inc	1013 W Hillcrest Ave	Inglewood	90301	Los Angeles	T10000013511
Los Angeles	Nasmyth Tmf, Inc. (Burbank Facility)	3401 Pacific Ave	Burbank	91505	Los Angeles	T10000013512
Los Angeles	Palace Plating	710 East 29th Street	Los Angeles	90011	Los Angeles	T10000013513
Los Angeles	Pemaco Metal Processing Corp.	2125 Lemon St.	Alhambra	91803	Los Angeles	SL603799182
Los Angeles	Pennoyer-Dodge Co	6650 San Fernando Road	Glendale	91201	Los Angeles	T10000013514
Los Angeles	Pentrate Metal Proc	3517 E Olympic Blvd	Los Angeles	90023	Los Angeles	T10000013515
Los Angeles	Ponam Ltd, Inc	6618 San Fernando Rd	Glendale	91201	Los Angeles	T10000013516
Los Angeles	Precision Control Finishing	12150 S Bloomfield Ave Ste D	Santa Fe Springs	90670	Los Angeles	T10000013517
Los Angeles	Price Pfister	13500 Paxton	Pacoima	91331	Los Angeles	SL0603719273
Los Angeles	Prime Plating	11321 Goss St	Sun Valley	91352	Los Angeles	T10000013518
Los Angeles	Process Control Laboratory	2520 N Ontario St Bldg D	Burbank	91504	Los Angeles	T10000013519
Los Angeles	Product Engineering Corporation	2645 Maricopa St	Torrance	90503	Los Angeles	T10000013520
Los Angeles	QAP Metal Finishing	342 W 130th St	Los Angeles	90061	Los Angeles	T10000013521
Los Angeles	Quaker City Plating & Silversmith Ltd	11729 E Washington Blvd	Whittier	90606	Los Angeles	T10000013522
Los Angeles	Rebilt Metalizing Co	2229 E 38th St	Vernon	90058	Los Angeles	T10000013523
Los Angeles	Reuland Electric Co, H. Britton Lees	Po Box 1464	City Of Industry	91749	Los Angeles	T10000013524
Los Angeles	S & K Plating Inc	2727 N Compton Ave	Compton	90222	Los Angeles	T10000013525
Los Angeles	Santec, Inc	3501 Challenger St	Torrance	90503	Los Angeles	T10000013526
Los Angeles	Service Plating	1855 62nd St	Los Angeles	90001	Los Angeles	T10000013527

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LIST OF FACILITIES RECEIVING ORDER WQ 2019-0045-DWQ

Regional Board	Facility Name	Address	City	Zip	County	GeoTracker Global ID
Los Angeles	Shimadzu Precision Instruments, Inc.	3645 N. Lakewood Blvd.	Long Beach	90808	Los Angeles	T10000013528
Los Angeles	Size Control Plating Co	13349 Temple Ave	La Puente	91746	Los Angeles	T10000013529
Los Angeles	Sonic Plating (Gardena)	1930 W Rosecrans Ave	Gardena	90249-2930	Los Angeles	T10000013530
Los Angeles	Sonic Plating (Santa Fe Springs)	13002 Los Nietos Rd	Santa Fe Springs	90670	Los Angeles	T10000013531
Los Angeles	Southwest Plating	1344 Slauson	Los Angeles	90044	Los Angeles	T10000013532
Los Angeles	Specific Plating	1350,1362,1368 South Eastern Ave	Commerce	90040	Los Angeles	T10000013533
Los Angeles	Stabile Plating Co Inc	1150 E Edna Pl	Covina	91724	Los Angeles	T10000013534
Los Angeles	Steve's Plating Corp.	3111 N. San Fernando Blvd.	Burbank	91504	Los Angeles	SL603798626
Los Angeles	Stutzman Plating Co	5025-37 W Exposition Blvd	Los Angeles	90016	Los Angeles	T10000013536
Los Angeles	Sunvair, Inc.	29145 The Old Road	Valencia	91355	Los Angeles	T10000013537
Los Angeles	Superior Metal Finishing (Gardena)	1733 W 134th St	Gardena	90249	Los Angeles	T10000013538
Los Angeles	Superior Plating And Bumpers	1044 E. 2nd St.	Pomona	91766-2210	Los Angeles	T10000013539
Los Angeles	Supreme Plating & Coating, L De La Rosa	330 E Beach Ave	Inglewood	90302	Los Angeles	T10000013540
Los Angeles	The Bumper Shop	808 East Florence	Los Angeles	90003	Los Angeles	T10000013541
Los Angeles	TMW dba Aerochrome Plating	14660 Arminta Str	Panorama City	91402	Los Angeles	T10000013542
Los Angeles	Tool & Jig Plating Co	7635 S Baldwin Pl	Whittier	90602	Los Angeles	T10000013543
Los Angeles	Trico Industries - E. Slauson	3040 Slauson	Huntington Park	90255	Los Angeles	SL204911713
Los Angeles	Trident Plating Inc	10046 Romandel Ave	Santa Fe Springs	90670	Los Angeles	T10000013544
Los Angeles	Universal Metal Plating & Polishing	1526 W 1st St	Azusa	91702	Los Angeles	T10000013545
Los Angeles	V & M Plating	14024 South Avalon Boulevard	Los Angeles	90061-2692	Los Angeles	T10000008449
Los Angeles	Valence Surface Technologies dba Coast Plating	417 W 164th St	Gardena	90248	Los Angeles	T10000008609
Los Angeles	Valence Surface Technologies dba Coast Plating	128-150 W 154th St	Gardena	90248	Los Angeles	T10000013546
Los Angeles	Valence Surface Technologies dba Triumph Processing Inc	2588-2605 Industry Way	Lynwood	90262	Los Angeles	T10000013547
Los Angeles	Valley Plating Works Inc	5900 E Sheila St	Commerce	90040	Los Angeles	T10000013548
Los Angeles	Valley-Todeco, Inc	12975 Bradley Ave	Sylmar	91342	Los Angeles	SL204DW2400
Los Angeles	Van Nuys Plating Inc	6109 Vesper Ave	Van Nuys	91401	Los Angeles	T10000013549
Los Angeles	Van Nuys Plating Inc	14611 Bessemer St	Van Nuys	91411	Los Angeles	T10000013550
Los Angeles	Verne's Chrome Plating Inc	1559 W El Segundo Blvd	Gardena	90249	Los Angeles	T10000013551
Los Angeles	VM Aerospace	14024 S Avalon Blvd	Los Angeles	90061	Los Angeles	T10000013552
Los Angeles	Whitcomb Plating	655 S. Alderton	City of Industry	91744	Los Angeles	T10000013553
Los Angeles	Whiting Ent Inc dba Hi Tech Metal Polish	10140 Romandel	Santa Fe Springs	90670	Los Angeles	T10000013554
Los Angeles	Yolandas Plating	3419 Union Pacific Ave	Los Angeles	90023	Los Angeles	T10000013555
Central Valley (Fresno)	Commercial Electro Plating	1937 S Cherry Ave	Fresno	93721	Fresno	T10000013556
Central Valley (Fresno)	King Industrial Hard Chrome	1259 S. Shanning Avenue	Fresno	93706	Fresno	T10000013557
Central Valley (Fresno)	Meclec Plating/Metal Finishing	5945 E Harvard Ave	Fresno	93727	Fresno	T10000013558
Central Valley (Fresno)	New Age Metal Finishing	2142-2169 N Pleasant Ave	Fresno	93705	Fresno	T10000013559
Central Valley (Fresno)	R B & J Industries Inc	10069 Avenue 400	Dinuba	93618	Tulare	T10000013560
Central Valley (Fresno)	Rutter Army	2684 S Cherry	Fresno	93706	Fresno	T10000013561
Central Valley (Fresno)	Sum Inc dba AC Plating	317 Mt Vernon	Bakersfield	93307	Kern	T10000013562
Central Valley (Fresno)	Valley Chrome Plating Inc	1000 Hoblitt Ave	Clovis	93612	Fresno	T10000013563

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LIST OF FACILITIES RECEIVING ORDER WQ 2019-0045-DWQ

Regional Board	Facility Name	Address	City	Zip	County	GeoTracker Global ID
Central Valley (Fresno)	Visalia Custom Chrome Inc	1414 Switzer Ave	Visalia	93291	Tulare	T10000013564
Central Valley (Redding)	Walker's Custom Chrome	2145 Grand Coulee Blvd	Shasta Lake	96019	Shasta	T10000013565
Central Valley (Sac)	A & A Enterprises	8290 Alpine Avenue	Sacramento	95826	Sacramento	T10000013566
Central Valley (Sac)	AAA Plating	2081 Rene Ave Bldg C	Sacramento	95838	Sacramento	T10000013567
Central Valley (Sac)	Chrome Craft Facility (Former)	1819 23rd St	Sacramento	95816	Sacramento	SL0606709398
Central Valley (Sac)	Harris and Bruno Int	8555 Washington Ave	Roseville	95678	Placer	T10000013570
Central Valley (Sac)	Metal Finishing Group Llc	8290 Alpine Ave	Sacramento	95826	Sacramento	T10000013572
Central Valley (Sac)	Modesto Plating	436 Mitchell Rd Ste D	Modesto	95354	Stanislaus	T10000013573
Central Valley (Sac)	Rodriguez All Bumper Repair/Custom Polishing	7903 Highway 70	Marysville	95901	Yuba	T10000013574
Central Valley (Sac)	S Street Redevelopment Project	1717 S Street	Sacramento	95811	Sacramento	SL0606729753
Central Valley (Sac)	San Joaquin Chromeworks	910 Black Diamond Unit B	Lodi	95240	San Joaquin	T10000013576
Central Valley (Sac)	Sherms Custom Plating	2140 Acoma St	Sacramento	95815	Sacramento	T10000013577
Central Valley (Sac)	STA/Chrome Craft	5950 88th Street	Sacramento	95828	Sacramento	T10000013578
Central Valley (Sac)	Valley Plating	1236 N Filbert St	Stockton	95205	San Joaquin	T10000013579
Central Valley (Sac)	West Coast Chrome	451 Sonora Ave, #J & D	Modesto	95356	Stanislaus	T10000013580
Colorado River Basin	Allen Industrial & Machine	960 S Hathaway St	Banning	92220	Riverside	T10000013581
Colorado River Basin	Palm Spring Plating	345 Del Sol Rd	Palm Springs	92262	Riverside	T10000013582
Colorado River Basin	Precision Plating	7361 Hopi Tr.	Yucca Valley	92284	San Bernardino	T10000013583
Santa Ana	All Metals Processing Of Oc Inc	8401 Standustrial St	Stanton	90680-2688	Orange	T10000013585
Santa Ana	Alumin-Art Plating Co Inc	803 W State St	Ontario	91762	San Bernardino	T10000013586
Santa Ana	Andres Technical Plating	1055 Ortega Way	Placentia	92870	Orange	T10000013587
Santa Ana	Anodyne Inc	2230 S Susan St	Santa Ana	92704	Orange	T10000013588
Santa Ana	Beo Mag Plating Inc	3315 W Harvard St	Santa Ana	92704	Orange	T10000013589
Santa Ana	Black Oxide Industries Inc	1745 Orangethorpe Park	Anaheim	92801	Orange	T10000013590
Santa Ana	Brasstech Inc	2001 Carnegie Ave	Santa Ana	92705	Orange	T10000013591
Santa Ana	Bush Polishing & Chrome	2236 W 2nd St	Santa Ana	92703	Orange	T10000013592
Santa Ana	California Polish	4603 Brooks St #3	Montclair	91763	San Bernardino	T10000013593
Santa Ana	Ceo-To-Go/Ride Wright Wheels	3080 E. La Jolla St	Anaheim	92806	Orange	T10000013594
Santa Ana	Chromadora Inc	2515 S Birch St	Santa Ana	92707	Orange	T10000013595
Santa Ana	Chrometech Inc	2310 W Cape Cod Way	Santa Ana	92703	Orange	T10000013596
Santa Ana	Coastline Metal Finishing Inc	7061 Patterson Dr	Garden Grove	92841	Orange	T10000013597
Santa Ana	CPPG, Inc	3911 E Miraloma Ave	Anaheim	92806	Orange	T10000013598
Santa Ana	Dnr Industries, Inc.	1562 S Anaheim Blvd	Anaheim	92805	Orange	T10000013599
Santa Ana	Dynamic Plating	952 West 9th St	Upland	91786	San Bernardino	T10000013600
Santa Ana	Electrode Technologies Inc DbA Reid Metal Finishing	3110 W Harvard St Ste 14	Santa Ana	92704-3940	Orange	T10000013601
Santa Ana	Electron Plating III	13932 Enterprise Dr	Garden Grove	92843	Orange	T10000013602
Santa Ana	Embee Processing	2136 S Hathaway St	Santa Ana	92705	Orange	T10000013603
Santa Ana	Escalette Llc dba RSS Manufacturing	1275 Logan Ave	Costa Mesa	92626-4004	Orange	T10000013605
Santa Ana	Fontana Plating	130 West Mindanao St.	Rialto	92316	San Bernardino	T10000006443
Santa Ana	Former Production Plating/Monogram Residential Huntington Beach Project	16091 Gothard Street	Huntington Beach	92647	Orange	T10000013606

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LIST OF FACILITIES RECEIVING ORDER WQ 2019-0045-DWQ

Regional Board	Facility Name	Address	City	Zip	County	GeoTracker Global ID
Santa Ana	Former S & S Polishing and Plating	1501 North Miller Street	Anaheim	92806-1418	Orange	T10000013607
Santa Ana	Fullerton Custom Works Inc	1163 E Elm St	Fullerton	92831	Orange	T10000013608
Santa Ana	Gorillas Polishing & Plating/Lm Chrome Corp	654 E Young St.	Santa Ana	92705	Orange	T10000013609
Santa Ana	Hartwell Corp	9810 6th St	Rancho Cucamonga	91730	San Bernardino	T10000013610
Santa Ana	Hightower Plating & Manufacturing Co	2090 N Glassell Blvd	Orange	92865	Orange	T10000013611
Santa Ana	Hixson Metal Finishing	816-829 Production Pl	Newport Beach	92663	Orange	T10000013612
Santa Ana	Kryler Corp	1217 E Ash Ave	Fullerton	92831-5019	Orange	T10000013613
Santa Ana	La Habra Plating Company	900 S Cypress St.	La Habra	90631	Orange	T10000013614
Santa Ana	Magma Finishing Corp.	2294 N Batavia Ste D	Orange	92865	Orange	T10000013615
Santa Ana	Markland Manufacturing Inc	1111 E Mcfadden Ave	Santa Ana	92705	Orange	T10000013616
Santa Ana	MJB Chrome Plating & Polishing	236 S Riverside Ave	Rialto	92376	San Bernardino	T10000013617
Santa Ana	Neutron Plating Inc	2993 E Blue Star St	Anaheim	92806	Orange	T10000013618
Santa Ana	Omni Metal Finishing Inc	11665-11688 Coley River Cir	Fountain Valley	92708	Orange	T10000013619
Santa Ana	Pacific Chrome Services	603 E Alton Ave	Santa Ana	92705	Orange	T10000013620
Santa Ana	Platinum Surface Coating Inc	1179 N Fountain Way	Anaheim	92806-2009	Orange	T10000013621
Santa Ana	Precision Anodizing & Plating Inc	1601 N Miller St	Anaheim	92806-1417	Orange	T10000013622
Santa Ana	Roto-Die Company Inc	712 N Valley St, Unit B	Anaheim	92801	Orange	T10000013623
Santa Ana	RTR Industries Llc/Grant Piston Ring Co	1360 Jefferson St	Anaheim	92807	Orange	T10000013624
Santa Ana	Santa Ana Plating	411 E. Alton	Santa Ana	92707	Orange	T10000013625
Santa Ana	South Bay Chrome	2041 S Grand Ave	Santa Ana	92705	Orange	T10000013626
Santa Ana	Superior Plating	1901 E Cerritos Ave	Anaheim	92805	Orange	T10000013627
Santa Ana	Techplate Engineering Co	1571 S Sunkist St	Anaheim	92806	Orange	T10000013628
Santa Ana	Triumph Processing, Embee Div, Inc. (Santa Ana)	2136-68 S Hathaway St	Santa Ana	92705	Orange	T10000013629
Santa Ana	West Coast Plating, Former	2525 S. Birch Street	Santa Ana	92705	Orange	T10000010412
San Diego	Alphacoat Finishing, Inc	9352 Cabot Dr	San Diego	92126	San Diego	T10000013630
San Diego	Clover Leaf Technologies Inc	607 Brazos St Ste Q	Ramona	92065-1887	San Diego	T10000013631
San Diego	Equality Plating Co	8172 Center St	La Mesa	91942	San Diego	T10000013632
San Diego	Escondido Plating Inc	860 Metcalf St	Escondido	92025	San Diego	T10000013633
San Diego	Fleet Readiness Center	Naval Air Station North Island	San Diego	92135	San Diego	T10000013634
San Diego	Golden State Metal Finishing	2737 Via Orange Way 104	Spring Valley	91978-1750	San Diego	T10000013635
San Diego	Industrial Metal Processing	10145 Prospect Ave	Santee	92071	San Diego	T10000013636
San Diego	Miramar Metal Processing Inc	9090 Kenamar Dr Ste A	San Diego	92121	San Diego	T10000013637
San Diego	Northside San Diego International Airport Redevelopment (Former General Dynamics Facility)	3302 Pacific Highway	San Diego	92101-1137	San Diego	T10000002563
San Diego	Premier Metal Processing Inc	971 Vernon Way	El Cajon	92020	San Diego	T10000013638
San Diego	Sanchez Polishing & Plating	1175 Industrial Ave #W	Escondido	92029	San Diego	T10000013639
San Diego	Sheffield Platers Inc	9850 Waples St	San Diego	92121	San Diego	T10000013640
San Diego	West Coast Plating	2613 Temple Heights Dr #D	Oceanside	92056	San Diego	T10000013642

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ATTACHMENT 2

QUESTIONNAIRE AND REQUIREMENTS FOR CHROME PLATING FACILITIES

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

CONTENTS:

- A. *Justification*
- B. *Site Investigation and Technical Report Requirements*
- C. *Questionnaire*

A. JUSTIFICATION

In 2007, the Minnesota Pollution Control Agency tested the influent, effluent, and sludge at wastewater treatment plants (WWTPs) across the State for per- and polyfluoroalkyl substances (PFAS) in order to determine if PFAS were present in these waste streams, and could therefore be a source of PFAS to the broader environment. Through this testing, the State of Minnesota found high levels of perfluorooctane sulfonate (PFOS) at the Brainerd, Minnesota WWTP, and identified a chromium electroplating facility (Keystone Automotive) as the source. Since 1995, Keystone Automotive had been applying a commonly used PFOS-containing mist suppressant (Fumetrol 140®) in order to comply with the Clean Air Act hexavalent chromium (Cr(VI)) maximum achievable control technology standard.

Based on the State of Minnesota's findings, the United States Environmental Protection Agency Region 5 (EPA R5) initiated a study to investigate whether releases from chromium electroplating facilities could be a widespread source of PFOS in the environment. Discharged process wastewater samples were collected immediately prior to entry into the public sewerage system from 11 facilities in Illinois and Ohio. These samples were analyzed for 13 PFAS, including PFOS. Data showed that PFAS were discharged from all 11 facilities' waste streams at quantifiable levels above background. Concentrations of the PFAS analyzed at the 11 facilities during the EPA R5 study are summarized in **Table 1**.

TABLE 1

**EPA REGION 5 – HEXAVALENT CHROMIUM ELECTROPLATING FACILITIES
WASTEWATER EFFLUENT PFAS ANALYTICAL RESULTS**

Facility Number	perfluorobutanoate (PFBA)	perfluoropentanoate (PFPeA)	perfluorohexanoate (PFHxA)	perfluorohexanoate (PFHpA)	perfluorooctanoate (PFOA)	perfluorononanoate (PFNA)	perfluorodecanoate (PFDA)	perfluoroundecanoate (PFUnA)	perfluorododecanoate (PFDoA)	perfluorobutane sulfonate (PFBS)	perfluorohexane sulfonate (PFHxS)	perfluorooctane sulfonate (PFOS)	perfluorooctane sulfonamide (PFOSA)	Sum of PFAS
1	9.06	42.6	90.7	56.2	83.3	ND	ND	ND	ND	9,160	67.8	31,100	ND	40,610
2	48.3	30.9	ND	ND	ND	ND	ND	ND	ND	41,800	306	708	ND	42,893
3	ND	ND	177	175	650	13,100	27.1	44.1	ND	75.5	ND	ND	ND	14,249
4	ND	ND	ND	ND	ND	ND	ND	ND	ND	15,600	ND	39,000	ND	54,600
5	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,010	ND	2,320	ND	3,330
6	ND	ND	ND	ND	4.02	ND	ND	ND	ND	1,570	16.3	1,380	ND	2,970
7	ND	1.08	ND	ND	3.11	ND	ND	ND	ND	ND	ND	301	ND	305
8	ND	ND	2.3	1.17	3.17	ND	ND	ND	ND	311	993	1,770	ND	3,081
9	ND	ND	ND	ND	1.73	ND	ND	ND	ND	2,250	163	4,460	ND	6,875
10	1.54	1.29	1.82	ND	3.32	ND	ND	ND	ND	ND	3.53	31.4	ND	42.9
11	14.3	ND	ND	ND	ND	ND	ND	ND	ND	1,510	9,430	1,260	ND	12,214

Analytical results shown in parts per trillion (ppt).

ND = Not detected above laboratory reporting limit.

Source: U.S. EPA Region 5. PFOS Chromium Electroplater Study, 2009 (www.in.gov/idem/ctap/files/plating_chromium_pfos_study.pdf)

Additionally, a 2003 survey conducted by the California Air Resources Board (CARB) found that 190 of the 222 Cr(VI) electroplating operations in California used a fume suppressant, either in part or solely, to control Cr(VI) emissions. Almost all of the 190 operations used a chemical fume suppressant with PFOS as the active ingredient, and 124 reported using the same suppressant (Fumetrol 140®) that Keystone Automotive used¹.

The EPA phased out the use of PFOS in fume suppressants effective September 21, 2015; CARB allowed the use of PFOS-based fume suppressants until September 21, 2016. Since that time, a number of non-PFOS fume suppressants have been identified and are approved for use in California chrome plating facilities. However, these newer non-PFOS fume suppressants may contain other PFAS.

Based on the above discussion, it is reasonable to conclude that PFAS may be present in and around most Cr(VI) electroplating operations. PFAS adsorbed to particles can be released to the environment via stack emissions, which may result in aerial deposition of PFAS to soil and surface water (with subsequent infiltration to groundwater). Additionally, PFAS in the liquid waste stream may be released to storm drains or sewers connected to WWTPs, which then discharge to surface water or groundwater.

The State Water Resources Control Board (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 Quality Control Boards (Regional Water Boards) to require monitoring and sampling of effluent wastes discharged to navigable water or WWTPs. Water 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 and 196 landfills, and intends to target other potential PFAS sources in the state 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.

In order to identify facilities that may have chrome plating operations, the State Water Board reviewed the California Emission Inventory Development and Reporting System (CEIDARS) and Stormwater Multiple Application and Report Tracking System (SMARTS) databases to identify facilities with the Standard Industrial Classification

¹ CARB, *Proposed Amendments to the Hexavalent Chromium Airborne Toxic Control Measure For Chrome Plating And Chromic Acid Anodizing Operations*, August 11, 2006 (ww3.arb.ca.gov/regact/chrom06/cpisor.pdf)

(SIC) code of 3471 (Electroplating, Plating, Polishing, Anodizing, and Coloring). The State Water Board also reviewed the Hazardous Waste Tracking System (HWTS) database maintained by the California Department of Toxics Substances Control to identify facilities identified with SIC code 3471 and which also reported Federal RCRA Waste Code D007 (chromium) and/or State Waste Code 723 (liquids with chromium (VI) >500 mg/L). All the identified facilities were further researched with phone calls and/or website reviews to determine if they currently perform chrome plating. Facilities without chrome plating operations were removed from the list.

To this list, the State Water Board added chrome plating facilities identified by CARB, as well as active Site Cleanup Cases and open cases managed by the California Department of Toxics Substances Control identified as former or current chrome plating facilities.

Because your facility was identified as potentially having chrome plating operations, the State Water Board seeks to determine whether the stormwater, effluent wastewater, groundwater, and/or soil at your location is impacted by PFAS and obtain an understanding of PFAS concentrations in the soil, groundwater, stormwater runoff, and/or effluent wastewater at your facility. As such, we are requiring you to perform the following actions:

- Submit a site investigation work plan in GeoTracker which details the various potential pathways for discharge of PFAS from your facility, and the nature of potential PFAS contamination in the soil, groundwater, stormwater, and effluent wastewater where applicable;
- Perform the site investigation; and
- Submit the results of the site investigation in a final report to the applicable Regional Water Board identified in the cover letter and upload to GeoTracker.

If your facility does not perform chrome plating, or if fume suppressants were not used, disposed, discharged, spilled, or released in any way to the land, drains, sewers, surface water, air, and/or groundwater at your facility, you may instead fill out and submit the questionnaire included in Section C. If the questionnaire is completely filled out and accepted by the local Regional Water Board, you will not be required to perform a site investigation at this time.

B. SITE INVESTIGATION AND TECHNICAL REPORT REQUIREMENTS

1. Work Plan

As stated above, you are required to submit a work plan if fume suppressants or other substances potentially containing PFAS were disposed, discharged, spilled, or released in any way to land, drains, sewers, surface water, air, and/or groundwater 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 January 31, 2020.** Requests for extensions must be submitted to the local Regional Water Board for approval by the Executive Officer.

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. Text describing how, when, and where the potential PFAS-containing material was stored, used, and/or released as well as a site map showing PFAS material storage and use areas including the locations of plating baths, wastewater discharge locations, stack locations, and other potential release locations to land, drains, sewers, surface water, air, and/or groundwater.
2. Text describing previous investigations, if any, conducted at your facility to identify and evaluate the presence of PFAS in soil, groundwater, stormwater, air, or effluent wastewater.
3. Text describing sensitive receptors as well as a map identifying sensitive receptors such as municipal supply wells, domestic wells, and/or surface water bodies within a one-mile radius of any suspected release areas.
4. Text describing the sampling rationale and a site map showing the following:
 - a. Proposed surface and subsurface soil sample locations where PFAS was potentially released to land, including but not limited to areas downwind of air emissions.
 - b. Proposed sample locations where PFAS may be currently and/or may have historically been released via effluent wastewater to drains, sewers, surface water and/or groundwater. This must include samples collected from effluent stormwater and/or sanitary sewer discharges, if those discharges occur or occurred. These samples can be collected concurrently with regularly scheduled stormwater and/or wastewater sampling events.

- c. Proposed representative groundwater sample locations in proximity to each suspected source area if either of the following conditions are present:
 - i. Soil sample analytical results indicate the presence of PFAS, or
 - ii. Evidence is present that indicates stormwater or wastewater potentially containing PFAS materials was discharged directly to land.

Existing monitoring wells may be used if located in proximity to the source area and if functioning properly so that representative groundwater samples can be collected. At a minimum, three groundwater sample locations must be sampled per source area: one hydrogeologically upgradient location and two downgradient locations.

5. Sampling and Analysis Plan for compounds and parameters specified in **Tables 2 and 3** that includes reporting limits and method detection limits. Specify the quality assurance/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, 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).

2. Investigation and Final Report

Perform an investigation based on the details described in the approved work plan; then, submit a final report. The final report must include the following information and be submitted **no later than 90 days** following the State or Regional Water Board acceptance of the work plan. Any requests for extensions must be submitted to the local Regional Water Board for approval by the Executive Officer.

- a. A description of the sampling activities performed;
- 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 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 the laboratory-certified analytical results.

3. Report and Electronic Laboratory Data Submittal Requirements

All documentation (including but not limited to the work plan, final report, analytical reports, and questionnaire, if applicable) must be uploaded into GeoTracker via the Electronic Submittal of Information (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](#) (www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal). Note: The EDD requirement includes all analytical data, monitoring well information (e.g. latitudes, longitudes, elevations, and depth to water), site maps, and boring logs.

4. Analytical Laboratory Requirements

The analytical laboratory must be accredited by the California Environmental Laboratory Accreditation Program (ELAP) to perform the EPA analytical method 8327 for PFAS or a method compliant with Department of Defense (DoD) Table B-15 of 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 2**. A list of laboratories that are accredited by ELAP by analytical method can be found on the State Water Board [ELAP webpage](#) (www.waterboards.ca.gov/drinking_water/certlic/labs).

For the general parameters listed in **Table 3**, the method of analysis shall be appropriate for the expected concentrations.

5. Licensed Professional Oversight

Oversight of investigation and preparation of documents must be completed by a California licensed Professional Geologist or Professional Engineer. The signature, stamp, and contact information for the Professional Geologist or Professional Engineer acting in responsible charge must be present in the work plan and investigation report.

TABLE 2
PFAS ANALYTES SUBJECT TO ANALYSIS AND THEIR RESPECTIVE REPORTING LIMITS

Chemical Name	Abbreviation	Fluorinated Alkane Carbon Chain Length*	Chemical Abstracts Service (CAS) No.	Required Reporting Limits	
				Aqueous: Groundwater and Effluent (ng/L)	Solid: Soil (µg/kg)
Perfluoroalkylcarboxylic acids (PFCAs)					
Perfluorobutanoic acid	PFBA	C4	375-22-4	8.0	2.0
Perfluoropentanoic acid	PFPeA	C5	2706-90-3	5.0	1.0
Perfluorohexanoic acid	PFHxA	C6	307-24-4	5.0	1.0
Perfluoroheptanoic acid	PFHpA	C7	375-85-9	5.0	1.0
Perfluorooctanoic acid	PFOA	C8	335-67-1	5.0	1.0
Perfluorononanoic acid	PFNA	C9	375-95-1	5.0	1.0
Perfluorodecanoic acid	PFDA	C10	335-76-2	5.0	1.0
Perfluoroundecanoic acid	PFUnDA	C11	2058-94-8	5.0	1.0
Perfluorododecanoic acid	PFDoDA	C12	307-55-1	5.0	1.0
Perfluorotridecanoic acid	PFTTrDA	C13	72629-94-8	5.0	1.0
Perfluorotetradecanoic acid	PFTTeDA	C14	376-06-7	8.0	2.0
Perfluorohexadecanoic acid*	PFHxDA	C16	67905-19-5	8.0	2.0
Perfluorooctadecanoic acid*	PFODA	C18	16517-11-6	8.0	2.0
Perfluorinated sulfonic acids (PFSA)					
Perfluorobutane sulfonic acid	PFBS	C4	375-73-5	5.0	1.0
Perfluoropentane sulfonic acid	PFPeS	C5	2706-91-4	5.0	2.0
Perfluorohexane sulfonic acid	PFHxS	C6	355-46-4	5.0	1.0
Perfluoroheptane sulfonic acid	PFHpS	C7	375-92-8	5.0	1.0
Perfluorooctane sulfonic acid	PFOS	C8	1763-23-1	5.0	1.0
Perfluorononane sulfonic acid*	PFNS	C9	474511-07-4	8.0	5.0
Perfluorodecane sulfonic acid	PFDS	C10	335-77-3	5.0	1.0
Perfluorocante Sulfonamide and Derivatives (PFOSA, FOSEs, FOSAs, and FOSAAs)					
Perfluorooctanesulfonamide	PFOSA	C8	754-91-6	8.0	1.0
N-Ethyl perfluorooctane sulfonamide ethanol*	EtFOSE	C8 Precursor	1691-99-2	8.0	2.0
N-Methyl perfluorooctane sulfonamide ethanol*	MeFOSE	C8 Precursor	24448-09-7	8.0	2.0
N-Ethyl perfluorooctane sulfonamide*	EtFOSA	C8 Precursor	4151-50-2	8.0	2.0
N-Methyl perfluorooctane sulfonamide*	MeFOSA	C8 Precursor	31506-32-8	8.0	2.0
N-Methyl perfluorooctane sulfonamidoacetic acid	NMeFOSAA	C8 Precursor	2355-31-9	20.0	2.5
N-Ethyl perfluorooctane sulfonamidoacetic acid	NEtFOSAA	C8 Precursor	2991-50-6	20.0	2.0
Fluorotelomer sulfonates (FTS)					
4:2 Fluorotelomer sulfonic acid	4:2 FTS	C4* Precursor	757124-72-4	8.0	1.0
6:2 Fluorotelomer sulfonic acid	6:2 FTS	C6* Precursor	27619-97-2	20.0	2.5
8:2 Fluorotelomer sulfonic acid	8:2 FTS	C8* Precursor	39108-34-4	20.0	2.0
10:2 Fluorotelomer sulfonic acid*	10:2 FTS	C10* Precursor	120226-60-0	8.0	2.0
Fluorotelomer carboxylic acids (FTCA)					
2H,2H,3H,3H-Perfluorohexanoic acid*	3:3 FTCA	C4* Precursor	356-02-5	8.0	5.0
2H,2H,3H,3H-Perfluorooctanoic acid*	5:3 FTCA	C6* Precursor	914637-49-3	8.0	5.0
2H,2H,3H,3H-Perfluorodecanoic acid*	7:3 FTCA	C8* Precursor	812-70-4	8.0	5.0
Perfluoroalkyl ether carboxylic acids (PFCEA)					
Hexafluoropropylene oxide dimer acid*	HFPO-DA	--	13252-13-6	20.0	5.0
4,8-Dioxa-3H-perfluorononanoic acid*	ADONA	--	919005-14-4	8.0	5.0
Chlorinated Polyfluoroalkyl Ether Sulfonic Acids (Cl-PFESAs)					
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9-Cl-PF3ONS	--	756426-58-1	8.0	5.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11-Cl-PF3OUdS	--	763051-92-9	8.0	5.0

Note: Only the 25 analytes without the asterisk (*) are required to be analyzed as part of this Order. The analytes with the asterisk (*) are included in some but not all lists provided by accredited laboratories and are encouraged to be analyzed as part of this effort.

ng/L = nanograms per liter

µg/kg = micrograms per kilogram

* = and shorter carbon chain length terminal degradation products

TABLE 3
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 µmhos/cm – micromhos per centimeter NTU – nephelometric turbidity units mg/L – milligrams per liter	

C. QUESTIONNAIRE

If your facility does not perform chrome plating, or if fume suppressants were not used, disposed, discharged, spilled, or released in any way to the land, drains, sewers, surface water, air, and/or groundwater at your facility, you may fill out and submit the below questionnaire in lieu of performing the site investigation described above. If the questionnaire is completely filled out and accepted by the local Regional Board, you will not be required to perform a site investigation at this time. If applicable, complete and return the questionnaire to the Regional Water Board specified in the Order cover letter **no later than November 25, 2019.** Any requests for extensions must be submitted to the local Regional Water Board for approval by the Executive Officer.

QUESTIONNAIRE:

Operator/Principal Name and Title: _____

Facility Name: _____

Facility Address: _____

Facility City/County/Zip: _____

Phone Number: _____

Fax Number: _____

Email Address: _____

Per- and Poly-Fluoroalkyl Substances (PFAS) - Constituent Screening

1. Have chemical fume suppressants, surfactants, wetting agents, or other potential PFAS-containing materials been used or stored at your facility?

YES NO

If yes, attach additional sheets to describe the following:

- a. *Brand name(s)*
- b. *Quantities stored/used*
- c. *where stored including address and a diagram showing storage location*
- d. *how long the material has been used/stored at facility*
- e. *any handling or control processes utilized*
- f. *any policy for storage and/or use*

2. If the answer to the above question number 1 was yes, have chemical fume suppressants, surfactants, wetting agents, or other potential PFAS-containing materials been discharged, spilled, disposed of, applied, or released in any way to land, drains, sewers, surface water, air, and/or groundwater at your facility?

YES NO

If no, attach additional sheets that provide a summary of how the materials are kept in a closed system and a detailed description of disposal processes.

3. If the answer to the above question number 2 was yes, have any investigations to identify the impacts of PFAS to soil and groundwater been conducted at your facility?

YES NO

If yes, attach the method of analysis, a summary table of analytical results, the laboratory analytical report.

Certification

This form and supporting documentation must be provided to the appropriate Regional Water Board specified in the Order cover letter and uploaded to GeoTracker by the date specified in the Order.

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.

Signature: _____

Title: _____

Date: _____

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