

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

STAFF SUMMARY REPORT (Marcos De la Cruz)  
MEETING DATE: November 14, 2018

ITEM: 6C

SUBJECT: **General Waste Discharge Requirements for Discharge or Reclamation of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by Volatile Organic Compounds (VOCs), Fuel Leaks, Fuel Additives, and Other Related Wastes (VOC and Fuel General Permit) – Amendment of General NPDES Permit**

CHRONOLOGY: December 2017 – General Permit adopted

DISCUSSION: This Revised Tentative Order (Appendix A) would amend the VOC and Fuel General Permit to remove manganese and sulfate effluent limits, reduce selenium monitoring and related requirements, update required analytical methods, and rescind pollutant mass removal reporting requirements.

The manganese and sulfate limits can be removed because there is no reasonable potential for these pollutants to cause or contribute to exceedances of water quality objectives in receiving waters. The selenium monitoring and related requirements can be reduced because U.S. EPA has developed updated selenium water quality criteria, and available data indicate that there is no reasonable potential for selenium to cause or contribute to exceedances of the new criteria. The changes will decrease the burden on dischargers that must comply with the existing limits pending foreseeable regulatory changes. The other changes simply update required analytical test methods and remove some unnecessary requirements.

We received four comment letters (Appendix B) on a tentative order circulated for public review. The most significant comments requested additional revisions to the required analytical test methods. We prepared a Response to Comments (Appendix C) and revised the draft order where appropriate. We expect this item to remain uncontested.

RECOMMEN-  
DATION: Adoption of the Revised Tentative Order

FILE: CW-740546

APPENDICES: A. Revised Tentative Order  
B. Comments  
C. Response to Comments



# Appendix A

## Revised Tentative Order





**San Francisco Bay Regional Water Quality Control Board**

**California Regional Water Quality Control Board  
San Francisco Bay Region**

**Revised Tentative Order No. R2-2018-00XX**

**Amendment of Order No. R2-2017-0048 (NPDES No. CAG912002)  
for General Waste Discharge Requirements for Discharge or Reclamation of Extracted and  
Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by Volatile  
Organic Compounds (VOCs), Fuel Leaks, Fuel Additives, and Other Related Wastes  
(VOC and Fuel General Permit)**

**WHEREAS** the California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter “Regional Water Board”), finds that:

1. On December 13, 2017, the Regional Water Board adopted Order No. R2-2017-0048, which reissued waste discharge requirements that serve as a National Pollutant Discharge Elimination System (NPDES) general permit (NPDES General Permit No. CAG912002) for discharges and reclamation of extracted and treated groundwater resulting from the cleanup of groundwater polluted by volatile organic compounds (VOCs), fuel leaks, fuel additives, and other related wastes. Order No. R2-2017-0048 (hereinafter “Permit”) authorizes dischargers enrolled under the Permit (hereinafter “Dischargers”) to discharge treated effluent from their respective facilities to waters of the United States pursuant to specific conditions.
2. The requirements of Order No. R2-2017-0048 will become effective January 1, 2019. Until then, Order No. R2-2012-0012 (previous order) contains the waste discharge requirements that serve as NPDES General Permit No. CAG912002.
3. This Order amends the Permit to do the following:
  - Rescind sulfate and manganese water quality-based effluent limits (WQBELs),
  - Reduce selenium monitoring and related requirements,
  - Provide for revised and alternate analytical test methods, and
  - Rescind reporting requirements for the mass removal of pollutants.
4. The Fact Sheet attached to this Order (Attachment F) contains background information and rationale for these changes. It is hereby incorporated into this Order by reference and therefore constitutes part of the findings for this Order.
5. This Order is exempt from the provisions of the California Environmental Quality Act pursuant to California Water Code section 13389.

6. The Regional Water Board notified the Dischargers and other interested agencies and persons of its intent to consider adoption of this Order and provided an opportunity to submit written comments. In a public meeting, the Regional Water Board heard and considered all comments pertaining to this Order.

**IT IS HEREBY ORDERED**, pursuant to the provisions of California Water Code Division 7 and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder, that the Dischargers shall comply with the Permit as amended by this Order, effective January 1, 2019. The changes are shown below in underline for additions and ~~strike through~~ for deletions.

A. Replace Permit Table 2 with the following:

**Table 2. Effluent Limitations**

Pollutant	Discharge to Receiving Waters Used as Drinking Water <sup>[1]</sup>		Discharge to Other Receiving Waters	
	Monthly Average (µg/L)	Daily Maximum (µg/L)	Monthly Average (µg/L)	Daily Maximum (µg/L)
pH	Between 6.5 and 8.5 units at all times.			
Antimony, Total Recoverable	--	6.0	4,300	8,600
Arsenic, Total Recoverable	--	10.	30.	59
Cadmium, Total Recoverable	0.90	1.8	0.90	1.8
Chromium III	--	50.	170	340
Chromium VI	--	10.	8.1	16
Copper, Total Recoverable <sup>[2]</sup>				
<i>Lower or South SF Bay Discharge</i>	10.	20.	10.	20.
<i>Central SF Bay Discharge</i>	5.4	11	5.4	11
<i>Suisun or San Pablo Bay Discharge</i>	7.1	14	7.1	14
<i>Freshwater Discharge</i>	7.0	14	7.0	14
Lead, Total Recoverable	2.6	5.2	2.6	5.2
Mercury, Total Recoverable	0.050	0.10	0.050	0.10
Nickel, Total Recoverable <sup>[2]</sup>				
<i>Lower or South SF Bay Discharge</i>	22	44	22	44
<i>Central SF Bay Discharge</i>	10.	21	10.	21
<i>Suisun or San Pablo Bay Discharge</i>	25	50.	25	50.
<i>Freshwater Discharge</i>	43	86	43	86
Selenium, Total Recoverable	4.1	8.2	4.1	8.2
Silver, Total Recoverable	1.1	2.2	1.1	2.2
Thallium, Total Recoverable	--	2.0	6.3	13
Zinc, Total Recoverable	47	95	47	95
Benzene	--	0.50	--	0.50
Chloroform	--	1.9	--	1.9
1,1-Dichloroethane	--	0.50	--	0.50
1,2-Dichloroethane	0.38	0.50	--	0.50
1,1-Dichloroethylene	0.057	0.11	--	0.50
Ethylbenzene	--	0.50	--	0.50
Tetrachloroethylene	--	0.50	--	0.50
Toluene	--	0.50	--	0.50
Cis-1,2-Dichloroethylene	--	0.50	--	0.50

Pollutant	Discharge to Receiving Waters Used as Drinking Water <sup>[1]</sup>		Discharge to Other Receiving Waters	
	Monthly Average (µg/L)	Daily Maximum (µg/L)	Monthly Average (µg/L)	Daily Maximum (µg/L)
Trans-1,2-Dichloroethylene	--	0.50	--	0.50
1,1,1-Trichloroethane	--	0.50	--	0.50
1,1,2-Trichloroethane	--	0.50	--	0.50
Trichloroethylene	--	0.65	--	0.65
Vinyl Chloride	--	0.50	--	0.90
Benzo(a)Anthracene	0.0044	0.0088	0.049	0.098
Benzo(a)Pyrene	0.0044	0.0088	0.049	0.098
Benzo(b)Fluoranthene	0.0044	0.0088	0.049	0.098
Benzo(k)Fluoranthene	0.0044	0.0088	0.049	0.098
Chrysene	0.0044	0.0088	0.049	0.098
Dibenzo(a,h)Anthracene	0.0044	0.0088	0.049	0.098
Indeno(1,2,3-cd) Pyrene	0.0044	0.0088	0.049	0.098
Total Xylenes	--	0.50	--	0.50
Methyl Tertiary Butyl Ether	--	0.50	--	0.50
TPH as gasoline	--	50	--	50
TPH as diesel	--	50	--	50
TPH as motor oil	--	100	--	100
Sulfate	250,000	500,000	--	--
Manganese	50	100	--	--
Turbidity	5.0 NTU	10. NTU	--	--
Chlorine, Total Residual	--	0.0 <sup>[3]</sup>	--	0.0 <sup>[3]</sup>

Abbreviations:

µg/L = micrograms per liter

NTU = nephelometric turbidity unit

Footnotes:

- <sup>[1]</sup> Receiving Waters Used as Drinking Water are defined as surface waters with existing or potential beneficial uses of "Municipal and Domestic Supply" or "Groundwater Recharge," or both. Groundwater recharge uses may include recharge areas to maintain salt balance or to halt salt water intrusion into fresh water aquifers.
- <sup>[2]</sup> The WQBEL for each estuarine discharge depends on the sub-embayment into which the discharge eventually flows. Freshwater WQBELs apply when the receiving water salinity is no more than one part per thousand at least 95 percent of the time.
- <sup>[3]</sup> This limit shall be applied as an instantaneous maximum. There shall be no detectable residual chlorine in the effluent (as explained in MRP section IX.B.5, a non-detect result using a detection level equal or less than 0.1 milligrams per liter [mg/L] will not be considered out of compliance).

**B. Replace Permit Monitoring and Reporting Program (MRP) Table E-2 with the following:****Table E-2. Minimum Monitoring Requirements**

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 <i>n</i> ) <sup>[1]</sup>	Effluent and Reclaimed Water (EFF- <i>n</i> , REC- <i>n</i> ) <sup>[1]</sup>	Receiving Water (RSW- <i>n</i> U, RSW- <i>n</i> D)
Flow	GPM/GPD/ MGD	--	Continuous	--	Continuous <sup>[2]</sup>	--

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 <i>n</i> ) <sup>[1]</sup>	Effluent and Reclaimed Water (EFF- <i>n</i> , REC- <i>n</i> ) <sup>[1]</sup>	Receiving Water (RSW- <i>n</i> U, RSW- <i>n</i> D)
Electrical Conductivity	S/m	EPA 120.1 or <u>SM 2510B</u>	Grab	--	SP, then 1/Month	--
pH	standard units	EPA 150.2	Grab	SP, then 1/Month	SP, then 1/Month	[3]
Temperature	°C	--	Grab	--	SP, then 1/Month	--
Turbidity	NTU	EPA 180.1 or <u>SM 2130B</u>	Grab	--	SP, then 1/Month	--
Total Dissolved Solids	mg/L	--	--	--	SP, then 1/Month	--
Dissolved Oxygen	mg/L	--	--	--	--	[3]
Hardness (as CaCO <sub>3</sub> )	mg/L	EPA 130.1 or <u>SM 2340B</u>	Grab	--	--	[3]
Salinity	‰	--	Grab	--	--	[3]
Sulfate	mg/L	EPA 375.2 or <u>EPA 300.0</u>	Grab	--	SP, then 1/Quarter, then 1/Year <sup>[4]</sup>	--
Manganese	µg/L	EPA 200.8 or <u>EPA 200.7</u>	Grab	--	SP, then 1/Quarter, then 1/Year <sup>[4]</sup>	--
Total Chlorine Residual <sup>[5]</sup>	mg/L	Field Kit, EPA 330, or SM4500-Cl	Grab	SP, then 1/Quarter	SP, then 1/Month	[3]
Antimony, Total Recoverable	µg/L	EPA 204.2 or <u>EPA 200.8</u>	Grab	[6]	[6]	[3]
Arsenic, Total Recoverable	µg/L	EPA 206.3 or <u>EPA 200.8</u>	Grab	[6]	[6]	[3]
Beryllium, Total Recoverable	µg/L	EPA 200.9 or <u>EPA 200.8</u>	Grab	[6]	[6]	[3]
Cadmium, Total Recoverable	µg/L	EPA 200.9 or <u>EPA 200.8</u>	Grab	[6]	[6]	[3]
Chromium III <sup>[7]</sup>	µg/L	<del>SM3500</del> --	Grab	[6]	[6]	[3]
Chromium VI <sup>[7]</sup>	µg/L	<del>SM3500</del> <u>EPA 218.6</u> or <u>EPA 7199</u>	Grab	[6]	[6]	[3]

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 <i>n</i> ) <sup>[1]</sup>	Effluent and Reclaimed Water (EFF- <i>n</i> , REC- <i>n</i> ) <sup>[1]</sup>	Receiving Water (RSW- <i>n</i> U, RSW- <i>n</i> D)
Copper, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	[6]	[6]	[3]
Lead, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	[6]	[6]	[3]
Mercury, Total Recoverable <sup>[8]</sup>	µg/L	EPA 1631E	Grab	[6]	[6]	[3]
Nickel, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	[6]	[6]	[3]
Selenium, Total Recoverable <sup>[9]</sup>	µg/L	EPA 200.9 or EPA 200.8 or <del>SM 3114B or C</del>	Grab	<del>6</del> Once	<del>6</del> Once	[3]
Silver, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	[6]	[6]	[3]
Thallium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	[6]	[6]	[3]
Zinc, Total Recoverable	µg/L	EPA 200.8	Grab	[6]	[6]	[3]
Cyanide, Total	µg/L	<del>SM 4500-CN - C or I</del> SM 4500-CN - D or E	Grab	[6]	[6]	--
Volatile Organic Compounds (VOCs) <sup>[9],[10]</sup>	µg/L	EPA 8260B (full list)	Grab	[6]	[6]	[3]
Semi-volatile organic compounds (SVOCs) excluding polynuclear aromatic hydrocarbons (PAHs) <sup>[5],[10],[11]</sup>	µg/L	EPA 8270C	Grab	SP, then 1/Quarter	SP, then 1/Month	--
PAHs <sup>[5],[9]</sup>	µg/L	EPA 610 or EPA 8270D	Grab	SP, then 1/Quarter	SP, then 1/Month	[3]
TPHs as Gasoline <sup>[5],[11],[12]</sup>	µg/L	EPA 8260B Modified or EPA 8015B Modified	Grab	SP, then 1/Quarter	SP, then 1/Month	[3]

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 <i>n</i> ) <sup>[1]</sup>	Effluent and Reclaimed Water (EFF- <i>n</i> , REC- <i>n</i> ) <sup>[1]</sup>	Receiving Water (RSW- <i>n</i> U, RSW- <i>n</i> D)
TPHs as Diesel <sup>[5],<del>++</del>[12]</sup>	µg/L	EPA 8015B Modified	Grab	SP, then 1/Quarter	SP, then 1/Month	[3]
TPHs other than Gasoline and Diesel <sup>[5],<del>++</del>[12]</sup>	µg/L	EPA 8015B Modified	Grab	SP, then 1/Quarter	SP, then 1/Month	[3]
Tertiary Amyl Methyl Ether (TAME), DiIsopropyl Ether (DIPE), Ethyl Tertiary Butyl Ether (ETBE), Tertiary Butyl Alcohol (TBA), Ethanol, and Methanol <sup>[5]</sup>	µg/L	<del>EPA 1625</del> Modified EPA 8260B	Grab	SP, then 1/Year	SP, then 1/Year	--
All other pollutants such as foaming agents <sup><del>++</del>[13]</sup>	various	--	Grab	SP, then 1/Month, then 1/Quarter, then 1/Year <sup><del>++</del>[14]</sup>	SP, then 1/Month, then 1/Quarter, then 1/Year <sup><del>++</del>[14]</sup>	[3]
Acute Toxicity	% survival	See MRP section V	Grab	--	1/Quarter, then 1/Year <sup><del>++</del>[15]</sup>	--
Standard Observations	--	--	--	--	SP, then 1/Month <sup><del>++</del>[16]</sup>	[3]

Abbreviations

GPM	= gallons per minute
GPD	= gallons per day
MGM	= million gallons per month
NTU	= nephelometric turbidity units
% survival	= percent survival
mg/L	= milligrams per liter
µg/L	= micrograms per liter
‰	= parts per thousand
S/m	= Siemens per meter
SM	= Standard Method
SP	= Start-up Phase

Footnotes:

- [1] When “Start-up Phase” is indicated, parameters shall be monitored once on the first day of start-up, ~~and~~ once on the fifth day of start-up, and then at the frequency indicated.
- [2] Flows shall be measured continuously in gallons per minute (GPM). Flows shall be recorded as gallons per day (GPD), and million gallons per month (MGM). Flows shall be monitored at each outfall or reclamation discharge point by a flow meter or as estimated if no flow meter is in place. The Executive Officer may require the Discharger to install flow meters.
- [3] Receiving water shall be monitored whenever there is an effluent limit violation. Receiving water monitoring shall occur on the same calendar day as effluent confirmation monitoring. Receiving water samples shall be analyzed for each violated effluent parameter.
- [4] If discharging to receiving waters used as drinking water, sulfate and manganese shall be monitored during the start-up phase, quarterly for the first year of operation, and annually thereafter. No monitoring is required if discharging to other receiving waters.

- [5] Chlorine residual, cyanide, VOCs, SVOCs, PAHs, TPHs (as gasoline, diesel), TPHs other than gasoline and diesel, TAME, DIPE, ETBE, TBA, ethanol, and methanol shall be monitored in influent and effluent if known to be present in the influent.
- [6] VOCs, metals and cyanide shall be monitored as follows:
- (A) Sites contaminated *only* with VOCs: VOCs shall be monitored at the influent on start-up phase, then quarterly. VOCs shall be monitored at the effluent on start-up phase, then monthly. Metals and cyanide shall be monitored at the influent and effluent on start-up phase, then annually.
  - (B) Sites contaminated with fuel and fuel-related compounds (including fuel-related VOCs): Dischargers shall monitor the influent on start-up phase, then twice per year. Dischargers shall monitor the effluent on start-up phase, then quarterly.
- [7] ~~Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 µg/L). Total chromium shall be analyzed using U.S. EPA method 200.8. Analysis for chromium III shall be obtained from the difference of the analytical results for total chromium and chromium VI.~~
- [8] If the discharge exceeds the effluent limitation for mercury, the Discharger shall re-sample and analyze using ultra-clean techniques as described in U.S. EPA methods 1669 and 1631 to eliminate the possibility of artefactual contamination of the sample.
- [9] Monitoring shall be performed using low-level detection techniques to achieve reporting levels below effluent limitations.
- ~~[9]~~[10] The analytes shall include those listed in USEPA SW-846 Test Method 8260 B: Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (December 1996) except internal standard and surrogate compounds. Where appropriate, monitoring of pollutants with effluent limitations shall be performed using low-level detection techniques from any U.S. EPA method 8260 to achieve reporting levels below effluent limitations.
- ~~[10]~~[11] Monitoring of bis(2-ethylhexyl)phthalate shall be performed using ultra clean sampling techniques for re-evaluation during future permit reissuance.
- ~~[11]~~[12] TPHs shall be analyzed without silica-gel cleanup.
- ~~[12]~~[13] All other pollutants, such as foaming agents shall be monitored at the influent and effluent if known to be present in the influent.
- ~~[13]~~[14] After the start-up phase, parameters shall be monitored monthly for the first year of operation, quarterly for the second year of operation, and annually thereafter.
- ~~[14]~~[15] Acute toxicity shall be monitored quarterly for the first year of operation and annually thereafter.
- ~~[15]~~[16] For reclaimed water only.

**C. Replace Permit section IV.A with the following:**

All discharges from each groundwater treatment facility, including discharges to outfalls defined in an NOI and Authorization to Discharge, shall comply with the following effluent limits.

Upon becoming aware of any effluent limitation violation other than a selenium effluent limitation violation, the Discharger shall contain the effluent in a holding tank or shut down the extraction and treatment system until the violation is corrected. ...

**D. Replace Permit MRP section IV.D with the following:**

If monitoring results indicate a violation of any effluent limitation other than a selenium effluent limitation, the Discharger shall take a confirmation effluent sample and receiving water samples within 24 hours of becoming aware of the violation. ...

**E. Replace Permit MRP Table E-3 with the following:****Table E-3. Monitoring Periods and Reporting Schedule**

<b>Sampling Frequency</b>	<b>Monitoring Period Begins On...</b>	<b>Monitoring Period<sup>[1]</sup></b>
Continuous	First day of discharge	All times while the facility is discharging
SP	Start-up date	First day of start-up phase through last day of start-up phase.
1/Month	First day of calendar month following the last day of start-up phase.	First day of calendar month through last day of calendar month
1/Quarter	Closest of January 1, April 1, July 1, or October 1 following (or on) the last day of start-up phase.	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31
2/Year	Closest of January 1 or July 1 following (or on) the last day of the start-up period. <sup>[2]</sup>	January 1 through June 30 July 1 through December 31
1/Year	January 1 following (or on) the last day of the start-up period.	January 1 through December 31
<u>Once</u>	<u>First day of discharge</u>	<u>Once per permit term such that results are available to submit with the Notice of Intent required by Provision VI.C.2.e of this Order</u>

Footnotes:<sup>[1]</sup> Reporting begins on the effective date of Authorization to Discharge.<sup>[2]</sup> Monitoring conducted during the term of the previous order may be used to satisfy monitoring required with this sampling frequency.**F. Remove Permit MRP section IX.B.2.b.iv(g) as follows:**

~~Tabular summary of mass removal of pollutant(s), with effluent limitations, in treatment system during the reporting period. Total quantities shall be reported in kilograms (kg).~~

I, Bruce H. Wolfe, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on November 14, 2018.

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Bruce H. Wolfe, Executive Officer



## ATTACHMENT F – FACT SHEET

This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

### I. PURPOSE

This Order amends Order No. R2-2017-0048 (Permit) to do the following:

- Rescind sulfate and manganese water quality-based effluent limits (WQBELs),
- Reduce selenium monitoring and related requirements,
- Provide for revised and alternate analytical methods, and
- Rescind reporting requirements for mass removal of pollutants.

### II. BACKGROUND

On December 13, 2017, the Regional Water Board adopted Order No. R2-2017-0048, which reissued General Permit No. CAG912002 for discharges and reclamation of extracted and treated groundwater resulting from the cleanup of groundwater polluted by volatile organic compounds (VOCs), fuel leaks, fuel additives, and other related wastes. The Permit contains reopener provisions based on 40 C.F.R. sections 122.62 and 122.63 that allow modification of the Permit under various circumstances, including when investigations demonstrate that the discharges governed by that order will cease to have a reasonable potential to cause or contribute to adverse impacts on water quality or beneficial uses of the receiving waters (see Permit Provision VI.C.1.a). Moreover, because Clean Water Act (CWA) section 308 and 40 C.F.R. sections 122.41(h), 122.41(j)-(l), 122.44(i), and 122.48 require that NPDES permits specify monitoring and reporting requirements, and because Water Code sections 13267 and 13383 authorize the Regional Water Board to establish monitoring and reporting requirements, these statutes authorize the Regional Water Board to amend the monitoring and reporting requirements of the Permit.

### III. RATIONALE

- A. Sulfate Limits.** This Order rescinds the sulfate effluent limits based on a revised analysis indicating that sulfate has no reasonable potential to cause or contribute to exceedance of the sulfate water quality objective in receiving waters. The original reasonable potential analysis had been based on the protocol set forth in the State Implementation Policy; however, that policy is only required for priority pollutants. Sulfate is not a priority pollutant, so the policy merely serves as guidance.

U.S. EPA's *Technical Support Document for Water Quality-Based Toxics Control* (March 1991) provides additional guidance for conducting reasonable potential analyses. Consistent with sections 3.1.3, 3.3.5, and 3.3.8 of the *Technical Support Document*, reasonable potential may be determined by estimating receiving water concentrations and comparing them to applicable water quality objectives. When available receiving water data reflect the influence of effluent discharges, receiving water concentrations can be

measured directly and estimation is unnecessary. Monitoring data collected through the Surface Water Ambient Monitoring Program (SWAMP) from 2001 through 2015 show that sulfate concentrations in the San Francisco Bay Region's creeks ranged from 3.6 mg/l to 1,410 mg/l (the average was 83 mg/l). Only 16 out of 247 samples (about 6 percent) exceeded the sulfate water quality objective of 250 mg/L.

Discharges covered by the Permit appear to be unrelated to the instances of creek sulfate concentrations exceeding the water quality objective. Discharge monitoring data collected since November 2017 ranged from 42 mg/l to 670 mg/l. Although 10 of 29 sample results exceeded the sulfate water quality objective, all the exceedances corresponded to just two adjacent cleanup sites. The ambient groundwater sulfate concentrations at these sites are also higher than the water quality objective, and up-gradient and down-gradient groundwater monitoring indicates that the cleanup actions are not increasing groundwater sulfate concentrations (Rowland, K., personal communication, January 10, 2018). Notably, SWAMP data for the receiving waters downstream of these sites are no higher than 72 mg/l, well below the water quality objective. Because these discharges with the highest sulfate concentrations do not appear to cause or contribute to receiving water concentrations above the water quality objective, water quality-based effluent limitations are unnecessary. Although this Order rescinds the sulfate effluent limits, it retains sulfate monitoring at the frequency specified in the Permit.

**B. Manganese Limits.** This Order rescinds the manganese effluent limits because there is no reasonable potential for manganese to cause or contribute to exceedance of the manganese water quality objective in the receiving waters. The original reasonable potential analysis in the Permit had been based solely on monitoring data from discharges to receiving waters without the Municipal and Domestic Supply (MUN) or Groundwater Recharge (GWR) beneficial uses (e.g., tidal portions of creeks, where salinity makes the water unsuitable for drinking). However, the manganese water quality objective is a secondary Maximum Contaminant Level, which only applies to MUN and GWR waters. Therefore, there is no reasonable potential for manganese to cause or contribute to exceedance of the manganese water quality objective and no need for water quality-based effluent limitations. Although this Order rescinds the manganese effluent limits, it retains manganese monitoring at the frequency specified in the Permit.

**C. Selenium Monitoring and Related Requirements.** This Order revises the Permit's selenium monitoring and related requirements in anticipation of changes to the applicable selenium water quality objective. The existing objective, expressed as a water column concentration, was promulgated through the California Toxics Rule, and the regulations governing implementation of the California Toxics Rule are set forth in the State Implementation Policy. The rationale for the Permit imposing selenium effluent limits is based on the State Implementation Policy, and this Order does not change those limits.

However, U.S. EPA now recommends new selenium water quality criteria that the State may promulgate as new water quality objectives. U.S. EPA explains its recommended selenium criteria in *Aquatic Life Ambient Water Quality Criterion for Selenium* –

*Freshwater* (2016). Specifically, it recommends four criteria, two based on selenium concentrations in fish tissue (egg-ovary and whole body or muscle) and two based on selenium concentrations in the water column (monthly exposure and intermittent exposure), as listed in the table below:

**U.S. EPA Recommended Freshwater Selenium Criteria**

Media Type	Fish Tissue <sup>[1]</sup>		Water Column <sup>[4]</sup>	
Criterion	Egg-Ovary <sup>[2]</sup>	Fish Whole Body or Muscle <sup>[3]</sup>	Monthly Average Exposure	Intermittent Exposure
Magnitude	15.1 mg/kg dw	8.5 mg/kg dw whole body or 11.3 mg/kg dw muscle (skinless, boneless fillet)	1.5 ug/L (lentic aquatic systems) <sup>[5]</sup> 3.1 ug/L (lotic aquatic systems) <sup>[6]</sup>	$WQC_{int} = \frac{WQC_{30-day} - C_{bkgnd}(1 - f_{int})}{f_{int}}$
Duration	Instantaneous	Instantaneous	30 days	Number of days/month with an elevated concentration
Frequency	Not to be exceeded	Not to be exceeded	Not more than once in 3 years on average	Not more than once in 3 years on average

Abbreviations

mg/kg dw = milligrams per kilogram dry weight  
 µg/L = micrograms per liter  
 WQC<sub>int</sub> = water quality criterion for intermittent exposure  
 WQC<sub>30-day</sub> = water column monthly criterion for lentic or lotic waters  
 C<sub>bkgnd</sub> = average background selenium concentration  
 f<sub>int</sub> = fraction of any 30-day period during which elevated concentrations occur  
 (f<sub>int</sub> is assigned a value of greater or equal to 0.033, corresponding to 1 day)

Footnotes:

- <sup>[1]</sup> Fish tissue criteria are expressed as steady-state.
- <sup>[2]</sup> Egg-ovary supersedes any whole-body, muscle, or water column criterion when fish egg-ovary concentrations are measured.
- <sup>[3]</sup> Fish whole-body and muscle tissue criteria supersede water column criteria when both fish tissue and water concentrations are measured.
- <sup>[4]</sup> Water column criteria are expressed as dissolved total selenium in water and are the applicable criteria in the absence of fish tissue data.
- <sup>[5]</sup> Lentic aquatic systems are standing (nonflowing) waters, such as lakes and ponds.
- <sup>[6]</sup> Lotic aquatic systems are flowing waters, such as rivers, creeks, or streams.

U.S. EPA recommends that the egg-ovary criterion supersede the other criteria because selenium toxicity and bioaccumulation are best evaluated through its reproductive effects in fish. U.S. EPA also recommends that the fish tissue criteria supersede the water column criteria, except in circumstances where fish tissue data are unavailable. The recommended water column criteria, which are lower than the current California Toxics Rule water quality objectives, are derived from the fish tissue criteria using bioaccumulation modeling, which incorporates a number of conservative assumptions.

U.S. Geological Survey monitoring data indicate that selenium concentrations in fish tissue from South San Francisco Bay meet U.S. EPA's new fish tissue criteria. The U.S. Geological Survey's report *Status of Selenium in South San Francisco Bay – A Basis for Modeling Potential Guidelines to Meet National Tissue Criteria for Fish and a Proposal Wildlife Criterion for Birds* (2018) provides selenium concentrations in aquatic life in South San Francisco Bay. In 2009 and 2014, selenium concentrations of 18 white sturgeon muscle samples ranged from 3.1 mg/kg to 9.7 mg/kg on a dry weight basis. Similarly, selenium concentrations of 13 white croaker muscle samples ranged from 2.2 mg/kg to 7.2 mg/kg on a dry weight basis. All these values are lower than the muscle criterion of 11.3 mg/kg.

Because South San Francisco Bay fish meet the new selenium criteria, the fish in tributary creeks likely also meet the new criteria. Therefore, the current selenium effluent limits will likely be removed from the Permit when the State (through the Regional Water Board or State Water Board) promulgates U.S. EPA's newly recommended water quality criteria as water quality objectives because there is no reasonable potential for discharges covered by the Permit to cause or contribute to exceedances of the new criteria.

Accordingly, in anticipation of this change, this Order revises the Permit's selenium requirements to reduce the burden on the Dischargers to comply with the existing limits. Dischargers in the southern part of the Region would otherwise need to address their relatively high selenium discharge concentrations, which result from natural groundwater conditions throughout Santa Clara County.<sup>1</sup> Such treatment upgrades would be unreasonable since they are unnecessary to protect water quality, would be extremely costly, and may only serve to move dissolved selenium from one discharge location to another. No available technology (including those typically employed at municipal wastewater treatment plants) actually breaks down selenium.

For the reasons explained above, this Order reduces the selenium monitoring frequency to once each permit term, removes the requirement to collect and analyze a confirmation sample after finding a selenium effluent limit violation, and eliminates the requirement to contain effluent onsite or shut down the extraction and treatment system following a second violation. This Order does not rescind the selenium effluent limits outright because the State Implementation Policy still requires them.

**D. Analytical Methods.** This Order provides for revised and alternate analytical test methods because some previously listed methods were outdated or not as widely available from certified laboratories. These updated methods are at least as sensitive as those listed in 40 C.F.R part 136.

**E. Mass Removal Reporting.** This Order removes the requirement to report pollutant mass removal because that information is unnecessary for any Permit-related purpose.

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<sup>1</sup> Ambient groundwater samples of water supply wells collected through the Groundwater Ambient Monitoring and Assessment Program (GAMA) since 1980 show that approximately 35 percent (144 out of 414 samples) have selenium concentrations above the water quality objective.

#### IV. DISCHARGE REQUIREMENT CONSIDERATIONS

- A. Anti-backsliding.** This Order complies with the anti-backsliding provisions of CWA sections 402(o) and 303(d)(4) and 40 C.F.R. section 122.44(1), which generally require new effluent limitations to be as stringent as those in the previous order. This Order does not change any effluent limitation in the previous order, which remains in effect until January 1, 2019. This Order removes sulfate and manganese effluent limitations that were to go into effect on January 1, 2019, because there is no reasonable potential for these pollutants to cause or contribute to the exceedance of water quality objectives. Consistent with State Water Board Order WQO-2003-0012, the elimination of water quality-based effluent limitations when there is no reasonable potential is not backsliding. Although this Order relaxes some selenium requirements (but not the selenium effluent limitations), any related potential backsliding is permissible under CWA section 402(o)(2)(B)(i), because this Order reflects new information not available when the previous order was adopted, and under CWA section 303(d)(4) because this Order also complies with antidegradation requirements.
- B. Antidegradation.** This Order is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. It continues with the status quo with respect to the discharges authorized in the previous order, which is the baseline by which to measure whether degradation will occur. It does not allow for a reduced level of treatment or less stringent effluent limitations. The rescinded sulfate and manganese effluent limitations were not to go into effect until January 1, 2019. The previous order did not contain selenium effluent limitations, and this Order does not change the selenium effluent limitations set to go into effect January 1, 2019.

#### V. PUBLIC PARTICIPATION

- A. Notification of Interested Parties.** The Regional Water Board notified the Dischargers enrolled under NPDES General Permit No. CAG912002 and interested agencies and persons of its intent to amend the Permit and provided an opportunity to submit written comments and recommendations. Notification was provided through the *Mercury News* in San Jose. The public had access to the agenda and any changes in dates and locations through the Regional Water Board's website at <http://www.waterboards.ca.gov/sanfranciscobay>.
- B. Written Comments.** Interested persons were invited to submit written comments concerning the tentative amendment as explained through the notification process. Comments were to be submitted either in person or by mail to the Executive Officer at the Regional Water Board at 1515 Clay Street, Suite 1400, Oakland, California, to the attention of Marcos De la Cruz. For full staff response and Regional Water Board consideration, the written comments were due at the Regional Water Board office by 5:00 p.m. on September 30, 2018.
- C. Public Hearing.** The Regional Water Board held a public hearing on the tentative amendment during its regular meeting at the following date and time, and at the following location:

Date: **November 14, 2018**  
Time: 9:00 a.m.  
Location: Elihu Harris State Office Building  
1515 Clay Street, 1<sup>st</sup> Floor Auditorium  
Oakland, CA 94612

Contact: Marcos De la Cruz, (510) 622-2365,  
[marcos.delacruz@waterboards.ca.gov](mailto:marcos.delacruz@waterboards.ca.gov)

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the tentative amendment. For accuracy of the record, important testimony was to be in writing.

The Regional Water Board web address is <http://www.waterboards.ca.gov/sanfranciscobay>, where one could access the current agenda for changes in dates and locations.

- D. Reconsideration of Amendment.** Any aggrieved person may petition the State Water Board to review the Regional Water Board decision regarding the tentative amendment. The State Water Board must receive the petition at the following address within 30 calendar days of the Regional Water Board action:

State Water Resources Control Board  
Office of Chief Counsel  
P.O. Box 100, 1001 I Street  
Sacramento, CA 95812-0100

For instructions on how to file a petition review, see [www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/wqpetition\\_instr.shtml](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml).

- E. Information and Copying.** Supporting documents and comments received are on file and may inspected at the address above between 9:00 a.m. and 5:00 p.m., Monday through Friday. Copying of documents may be arranged by calling (510) 622-2300.
- F. Register of Interested Persons.** Any person interested in being placed on the mailing list for information regarding NPDES permits should contact the Regional Water Board and provide a name, address, and phone number.
- G. Additional Information.** Requests for additional information or questions regarding this Order should be directed to Marcos De la Cruz at (510) 622-2365 or [marcos.delacruz@waterboards.ca.gov](mailto:marcos.delacruz@waterboards.ca.gov).

## Appendix B

### Comments







**FMC Corporation**  
2929 Walnut Street  
Philadelphia, PA 19104  
USA

215.299.6000  
fmc.com

**FMC Corporation**

September 13, 2018

Mr. Marcos De la Cruz  
California Regional Water Quality Control Board, San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Re: **Amendment of Order No. R2-2017-0048 (NPDES No. CAG912002)**

Dear Mr. De la Cruz:

**Comment 1**

FMC and consultants reviewed the Amendment of Order No. R2-2017-0048 (the Amendment). In our assessment, some of the analytical test methods included within the Amendment are outdated and the majority of laboratories do not hold certification to conduct them. Based on this assessment, we would like to propose some revised methods to be used for FMC Corporation sites. These changes would allow the selected contract laboratories to use methods they are currently certified to run and will reach the required effluent limits.

Table 1 lists the pollutants affected by updated methods and, respectively, the requested analytical methods and lowest effluent limits stated in Amendment Tables 2 and E-2. Table 1 also lists the laboratories contracted to analyze for these pollutants, proposed updated methods, and their associated reporting limits (RLs) and method detection limits (MDLs). All proposed method changes meet the lowest required limits in Table 2 of the Amendment. Attachment A contains all proposed analytical methods, RLs, and MDLs on laboratory letterhead.

In summary, the following method changes are being proposed:

- Chromium III will be calculated by subtracting chromium VI from total chromium. Total chromium will be analyzed using EPA method 200.8LL (Low Level).
- Total recoverable selenium will be analyzed using EPA method 200.8LL.
- The limit for 1,1-dichloroethylene is 0.057 micrograms per liter ( $\mu\text{g/L}$ ), which can be reached using the selective ion monitoring (SIM) mode for method SW-846 8260C.
- The polychlorinated aromatic hydrocarbon (PAH) limits can be reported using the SIM mode for method SW-846 8270D.
- Oxygenates will be analyzed by method SW-846 8260B.

Mr. Marcos De la Cruz  
September 13, 2018  
2

We look forward to your concurrence with these revised methods. If you have any questions or require additional information, please contact me at (215) 299-6047.

Sincerely,



Brian McGinnis  
Manager, Environmental Remediation

Attachments: Table 1 – Effluent Limits and Monitoring Requirements  
Attachment A – Analytical Methods, Reporting Limits, and Method Detection  
Limits

cc: S. James – Parsons  
J. Leu – Parsons

Table 1

**Effluent limits and Monitoring Requirements  
New Effluent Testing Requirements  
Amendment of Order No. R2-2017-048**

Pollutant	Requested Method	Lowest Eff Limit (µg/L)	Laboratory	Proposed Method	RL (µg/L)	MDL (µg/L)
Chromium III	EPA 1639	50	TestAmerica - Irvine	Calculation Cr-Cr+6 <sup>(1)</sup>	2	
Selenium, Total Recoverable	200.9 or 270.2	4.1	TestAmerica - Irvine	EPA 200.8LL	0.60	0.30
1,1-Dichloroethylene	8260B	0.057	ALS-Kelso	8260C SIM	0.02	0.0059
Benzo(a)Anthracene <sup>(2)</sup>	EPA 610	0.0044	ALS-Kelso	8270D PAH_SIM_ULL	0.0034	0.00034
Benzo(a)Pyrene <sup>(2)</sup>	EPA 610	0.0044	ALS-Kelso	8270D PAH_SIM_ULL	0.0034	0.00041
Benzo(b)Fluoranthene <sup>(2)</sup>	EPA 610	0.0044	ALS-Kelso	8270D PAH_SIM_ULL	0.0034	0.00025
Benzo(k)Fluoranthene <sup>(2)</sup>	EPA 610	0.0044	ALS-Kelso	8270D PAH_SIM_ULL	0.0034	0.00041
Chrysene <sup>(2)</sup>	EPA 610	0.0044	ALS-Kelso	8270D PAH_SIM_ULL	0.0034	0.00065
Dibenzo(a,h)Anthracene <sup>(2)</sup>	EPA 610	0.0044	ALS-Kelso	8270D PAH_SIM_ULL	0.0034	0.00045
Indeno(1,2,3-cd) Pyrene <sup>(2)</sup>	EPA 610	0.0044	ALS-Kelso	8270D PAH_SIM_ULL	0.0034	0.00044
TAME, DIPE, ETBE, TBA	EPA 1625 Modified	-	TestAmerica - Irvine	SW-846 8260B	0.5	0.25

## Notes:

(1) Table E-2. in the Amendment of Order No. R2-2017-048 does not list total chromium as a parameter and does not list a corresponding prescribed analytical test method. However, Footnote #7 in Table E-2 indicates "Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 µg/L)".

Total Cr is analyzed using EPA 200.8

(2) PAH

RL - Reporting Limit

MDL - Method Detection Limit

- Not applicable

# **Attachment A**

## **Analytical Methods, Reporting Limits, and Method Detection Limits**



**TestAmerica Irvine 8260 Low-Level Limits (8260B\_LL)**

MDLs last updated: 07/20/2016

RLs last updated: 08/20/2017

Issued: 07/17/2018

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Parameter			MDL		RL	
Analyte	CAS Num	Type	Limits	Units	Limits	Units
1,1,1,2-Tetrachloroethane	630-20-6	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,1,1-Trichloroethane	71-55-6	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	Analyte/Parameter	0.50	ug/L	2.0	ug/L
1,1,2-Trichloroethane	79-00-5	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,1-Dichloro-1-fluoroethane	1717-00-6	Analyte/Parameter	1.0	ug/L	2.5	ug/L
1,1-Dichloroethane	75-34-3	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,1-Dichloroethene	75-35-4	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,1-Dichloropropene	563-58-6	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,2,3-Trichlorobenzene	87-61-6	Analyte/Parameter	0.40	ug/L	1.0	ug/L
1,2,3-Trichloropropane	96-18-4	Analyte/Parameter	0.40	ug/L	1.0	ug/L
1,2,4-Trichlorobenzene	120-82-1	Analyte/Parameter	0.40	ug/L	1.0	ug/L
1,2,4-Trimethylbenzene	95-63-6	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,2-Dibromo-3-Chloropropane	96-12-8	Analyte/Parameter	0.5	ug/L	1.0	ug/L
1,2-Dibromoethane (EDB)	106-93-4	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,2-Dibromotetrafluoroethane	124-73-2	Analyte/Parameter	1.0	ug/L	5	ug/L
1,2-Dichloro-1,1,2-trifluoroethane	354-23-4	Analyte/Parameter	1.0	ug/L	2.0	ug/L
1,2-Dichlorobenzene	95-50-1	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,2-Dichloroethane	107-06-2	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,2-Dichloropropane	78-87-5	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,3,5-Trichlorobenzene	108-70-3	Analyte/Parameter	0.5	ug/L	1.0	ug/L
1,3,5-Trimethylbenzene	108-67-8	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,3-Butadiene	106-99-0	Analyte/Parameter	0.50	ug/L	1	ug/L
1,3-Dichlorobenzene	541-73-1	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,3-Dichloropropane	142-28-9	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1,4-Dichlorobenzene	106-46-7	Analyte/Parameter	0.25	ug/L	0.5	ug/L
1-Chlorohexane	544-10-5	Analyte/Parameter	1.0	ug/L	2	ug/L
2,2,3-Trimethylbutane	464-06-2	Analyte/Parameter	0.5	ug/L	2	ug/L
2,2-Dichloropropane	594-20-7	Analyte/Parameter	0.40	ug/L	1.0	ug/L
2,2-Dimethylpentane	590-35-2	Analyte/Parameter	0.5	ug/L	2	ug/L
2,3-Dimethylpentane	565-59-3	Analyte/Parameter	0.5	ug/L	2	ug/L
2,4-Dimethylpentane	108-08-7	Analyte/Parameter	0.5	ug/L	2	ug/L

### TestAmerica Irvine 8260 Low-Level Limits (8260B\_LL)

MDLs last updated: 07/20/2016

RLs last updated: 08/20/2017

Issued: 07/17/2018

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Analyte	CAS Num	Type	MDL		RL	
2-Butanone (MEK)	78-93-3	Analyte/Parameter	2.5	ug/L	5.0	ug/L
2-Chloro-1,3-butadiene	126-99-8	Analyte/Parameter	0.50	ug/L	1	ug/L
2-Chloroethyl vinyl ether	110-75-8	Analyte/Parameter	1.0	ug/L	2	ug/L
2-Chlorotoluene	95-49-8	Analyte/Parameter	0.25	ug/L	0.5	ug/L
2-Ethyl-1-butanol	97-95-0	Analyte/Parameter	10	ug/L	25	ug/L
2-Hexanone	591-78-6	Analyte/Parameter	2.5	ug/L	5.0	ug/L
2-Methylhexane	591-76-4	Analyte/Parameter	0.5	ug/L	2	ug/L
3,3-Dimethylpentane	562-49-2	Analyte/Parameter	0.5	ug/L	2	ug/L
3-Ethylpentane	617-78-7	Analyte/Parameter	0.5	ug/L	2	ug/L
3-Methylhexane	589-34-4	Analyte/Parameter	0.5	ug/L	2	ug/L
4-Chlorotoluene	106-43-4	Analyte/Parameter	0.25	ug/L	0.5	ug/L
4-Methyl-2-pentanone (MIBK)	108-10-1	Analyte/Parameter	2.5	ug/L	5.0	ug/L
Acetone	67-64-1	Analyte/Parameter	10	ug/L	20	ug/L
Acetonitrile	75-05-8	Analyte/Parameter	10	ug/L	20	ug/L
Acrolein	107-02-8	Analyte/Parameter	2.5	ug/L	5.0	ug/L
Acrylonitrile	107-13-1	Analyte/Parameter	1.0	ug/L	2.0	ug/L
Allyl chloride	107-05-1	Analyte/Parameter	0.50	ug/L	1	ug/L
Benzene	71-43-2	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Benzyl chloride	100-44-7	Analyte/Parameter	1.0	ug/L	2	ug/L
Bromobenzene	108-86-1	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Bromochloromethane	74-97-5	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Bromodichloromethane	75-27-4	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Bromoform	75-25-2	Analyte/Parameter	0.40	ug/L	1.0	ug/L
Bromomethane	74-83-9	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Butyl acrylate	141-32-2	Analyte/Parameter	2.0	ug/L	5	ug/L
Carbon disulfide	75-15-0	Analyte/Parameter	0.50	ug/L	1.0	ug/L
Carbon tetrachloride	56-23-5	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Chlorobenzene	108-90-7	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Chlorodibromomethane	124-48-1	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Chlorodifluoromethane	75-45-6	Analyte/Parameter	1.0	ug/L	2	ug/L
Chloroethane	75-00-3	Analyte/Parameter	0.40	ug/L	1.0	ug/L
Chloroform	67-66-3	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Chloromethane	74-87-3	Analyte/Parameter	0.25	ug/L	0.5	ug/L
cis-1,2-Dichloroethene	156-59-2	Analyte/Parameter	0.25	ug/L	0.5	ug/L



**TestAmerica Irvine 8260 Low-Level Limits (8260B\_LL)**

MDLs last updated: 07/20/2016

RLs last updated: 08/20/2017

Issued: 07/17/2018

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Analyte	CAS Num	Type	MDL		RL	
cis-1,3-Dichloropropene	10061-01-5	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Cyclohexane	110-82-7	Analyte/Parameter	1.0	ug/L	2	ug/L
Cyclohexanone	108-94-1	Analyte/Parameter	25	ug/L	50	ug/L
Dibromochloromethane	124-48-1	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Dibromomethane	74-95-3	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Dichlorobromomethane	75-27-4	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Dichlorodifluoromethane	75-71-8	Analyte/Parameter	0.40	ug/L	1.0	ug/L
Dichlorofluoromethane	75-43-4	Analyte/Parameter	0.50	ug/L	1.0	ug/L
Diethyl ether	60-29-7	Analyte/Parameter	1.0	ug/L	2	ug/L
Diisopropyl ether	108-20-3	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Dimethyl disulfide	624-92-0	Analyte/Parameter	1.0	ug/L	2	ug/L
Ethanol	64-17-5	Analyte/Parameter	75	ug/L	150	ug/L
Ethyl acrylate	140-88-5	Analyte/Parameter	2.0	ug/L	5	ug/L
Ethyl ether	60-29-7	Analyte/Parameter	1.0	ug/L	2	ug/L
Ethyl methacrylate	97-63-2	Analyte/Parameter	1.0	ug/L	2	ug/L
Ethyl tert-butyl ether	637-92-3	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Ethylbenzene	100-41-4	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Ethyl-t-butyl ether (ETBE)	637-92-3	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Hexachlorobutadiene	87-68-3	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Hexachloroethane	67-72-1	Analyte/Parameter	0.5	ug/L	1	ug/L
Hexane	110-54-3	Analyte/Parameter	1.0	ug/L	2	ug/L
Iodomethane	74-88-4	Analyte/Parameter	1.0	ug/L	2	ug/L
Isobutyl alcohol	78-83-1	Analyte/Parameter	12.5	ug/L	25	ug/L
Isooctane	540-84-1	Analyte/Parameter	0.5	ug/L	1	ug/L
Isopropyl alcohol	67-63-0	Analyte/Parameter	175	ug/L	250	ug/L
Isopropyl ether	108-20-3	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Isopropyl Ether (DIPE)	108-20-3	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Isopropylbenzene	98-82-8	Analyte/Parameter	0.25	ug/L	0.5	ug/L
m,p-Xylene	179601-23-1	Analyte/Parameter	0.50	ug/L	1.0	ug/L
Methacrylonitrile	126-98-7	Analyte/Parameter	2.5	ug/L	10	ug/L
Methyl acetate	79-20-9	Analyte/Parameter	5.0	ug/L	10	ug/L
Methyl acrylate	96-33-3	Analyte/Parameter	2.0	ug/L	5	ug/L
Methyl methacrylate	80-62-6	Analyte/Parameter	1.0	ug/L	2	ug/L
Methyl tert-butyl ether	1634-04-4	Analyte/Parameter	0.25	ug/L	0.5	ug/L

**TestAmerica Irvine 8260 Low-Level Limits (8260B\_LL)**

MDLs last updated: 07/20/2016

RLs last updated: 08/20/2017

Issued: 07/17/2018

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Analyte	CAS Num	Type	MDL		RL	
Methylacrylonitrile	126-98-7	Analyte/Parameter	2.5	ug/L	10	ug/L
Methylcyclohexane	108-87-2	Analyte/Parameter	1.0	ug/L	2	ug/L
Methylene Chloride	75-09-2	Analyte/Parameter	0.88	ug/L	2.0	ug/L
Methyl-t-Butyl Ether (MTBE)	1634-04-4	Analyte/Parameter	0.25	ug/L	0.5	ug/L
m-Xylene & p-Xylene	179601-23-1	Analyte/Parameter	0.50	ug/L	1.0	ug/L
Naphthalene	91-20-3	Analyte/Parameter	0.40	ug/L	1.0	ug/L
n-Butylbenzene	104-51-8	Analyte/Parameter	0.40	ug/L	1.0	ug/L
n-Heptane	142-82-5	Analyte/Parameter	1.0	ug/L	2.0	ug/L
Nonanal	124-19-6	Analyte/Parameter	2.0	ug/L	5	ug/L
n-Propylbenzene	103-65-1	Analyte/Parameter	0.25	ug/L	0.5	ug/L
o-Xylene	95-47-6	Analyte/Parameter	0.25	ug/L	0.5	ug/L
p-Isopropyltoluene	99-87-6	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Propionitrile	107-12-0	Analyte/Parameter	10	ug/L	20	ug/L
sec-Butylbenzene	135-98-8	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Styrene	100-42-5	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Tert-amyl methyl ether	994-05-8	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Tert-amyl-methyl ether (TAME)	994-05-8	Analyte/Parameter	0.25	ug/L	0.5	ug/L
tert-Butanol	75-65-0	Analyte/Parameter	5.0	ug/L	10	ug/L
tert-Butyl alcohol (TBA)	75-65-0	Analyte/Parameter	5.0	ug/L	10	ug/L
Tert-butyl ethyl ether	637-92-3	Analyte/Parameter	0.25	ug/L	0.5	ug/L
tert-Butylbenzene	98-06-6	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Tetrachloroethene	127-18-4	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Tetrahydrofuran	109-99-9	Analyte/Parameter	5	ug/L	10	ug/L
Thiophene	110-02-1	Analyte/Parameter	2.5	ug/L	5	ug/L
Toluene	108-88-3	Analyte/Parameter	0.25	ug/L	0.5	ug/L
trans-1,2-Dichloroethene	156-60-5	Analyte/Parameter	0.25	ug/L	0.5	ug/L
trans-1,3-Dichloropropene	10061-02-6	Analyte/Parameter	0.25	ug/L	0.5	ug/L
trans-1,4-Dichloro-2-butene	110-57-6	Analyte/Parameter	2.5	ug/L	5	ug/L
Trichloroethene	79-01-6	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Trichlorofluoromethane	75-69-4	Analyte/Parameter	0.25	ug/L	0.5	ug/L
Vinyl acetate	108-05-4	Analyte/Parameter	2.0	ug/L	4.0	ug/L
Vinyl chloride	75-01-4	Analyte/Parameter	0.25	ug/L	0.5	ug/L



**TestAmerica Irvine 200.8 Low-Level Limits (200.8\_CWA\_LL)**

MDLs last updated: 02/04/2014

RLs last updated: 02/04/2014

Issued: 07/17/2018

Page 1 of 1

Parameter			MDL		RL	
Analyte	CAS Num	Type	Limits	Units	Limits	Units
Aluminum	7429-90-5	Analyte/Parameter	5.0	ug/L	10	ug/L
Antimony	7440-36-0	Analyte/Parameter	0.20	ug/L	0.50	ug/L
Arsenic	7440-38-2	Analyte/Parameter	0.10	ug/L	0.20	ug/L
Barium	7440-39-3	Analyte/Parameter	0.10	ug/L	0.20	ug/L
Beryllium	7440-41-7	Analyte/Parameter	0.10	ug/L	0.20	ug/L
Cadmium	7440-43-9	Analyte/Parameter	0.050	ug/L	0.10	ug/L
Chromium	7440-47-3	Analyte/Parameter	0.25	ug/L	0.50	ug/L
Cobalt	7440-48-4	Analyte/Parameter	0.10	ug/L	0.20	ug/L
Copper	7440-50-8	Analyte/Parameter	0.25	ug/L	0.50	ug/L
Iron	7439-89-6	Analyte/Parameter	5.0	ug/L	10	ug/L
Lead	7439-92-1	Analyte/Parameter	0.050	ug/L	0.10	ug/L
Manganese	7439-96-5	Analyte/Parameter	0.25	ug/L	0.50	ug/L
Molybdenum	7439-98-7	Analyte/Parameter	0.10	ug/L	0.20	ug/L
Nickel	7440-02-0	Analyte/Parameter	0.150	ug/L	0.20	ug/L
Selenium	7782-49-2	Analyte/Parameter	0.30	ug/L	0.60	ug/L
Silver	7440-22-4	Analyte/Parameter	0.10	ug/L	0.20	ug/L
Thallium	7440-28-0	Analyte/Parameter	0.050	ug/L	0.10	ug/L
Uranium	7440-61-1	Analyte/Parameter	0.050	ug/L	0.10	ug/L
Vanadium	7440-62-2	Analyte/Parameter	0.10	ug/L	0.20	ug/L
Zinc	7440-66-6	Analyte/Parameter	2.0	ug/L	5.0	ug/L



ALS Environmental  
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1317 South 13<sup>th</sup> Avenue  
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T: +1 360 577 7222  
F: +1 360 636 1068  
[www.alsglobal.com](http://www.alsglobal.com)

August 16, 2018

Sue Scrocchi  
2055 Niagara Falls Boulevard.  
Niagara Falls, New York 14304

Dear Ms. Scrocchi,

**RE: EFFLUENT LIMITATIONS**

Please find the ALS Kelso capability for the Effluent Project.

**TABLE 1  
EFFLUENT LIMITATIONS**

Pollutant	Requested Method	Lowest Eff Limit (ug/L)	Laboratory	Proposed Method	RL (ug/L)	MDL (ug/L)
1,1-Dichloroethylene	8260B	0.057	ALS-Kelso	8260C SIM	0.02	0.0059
Benzo(a)Anthracene	610	0.0044	ALS-Kelso	8270D PAH_SIM_ULL	0.0034	0.00034
Benzo(a)Pyrene	610	0.0044	ALS-Kelso	8270D PAH_SIM_ULL	0.0034	0.00041
Benzo(b)Fluoranthene	610	0.0044	ALS-Kelso	8270D PAH_SIM_ULL	0.0034	0.00025
Benzo(k)Fluoranthene	610	0.0044	ALS-Kelso	8270D PAH_SIM_ULL	0.0034	0.00041
Chrysene	610	0.0044	ALS-Kelso	8270D PAH_SIM_ULL	0.0034	0.00065
Dibenzo(a,h)Anthracene	610	0.0044	ALS-Kelso	8270D PAH_SIM_ULL	0.0034	0.00045
Indeno(1,2,3-cd) Pyrene	610	0.0044	ALS-Kelso	8270D PAH_SIM_ULL	0.0034	0.00044

  
Janet Malloch

Project Manager

20180816 10:00:00 AM 10/10/2018 10:00:00 AM

**Table 2**  
**Monitoring Requirements**

Pollutant	Requested Method	Lowest Eff Limit (ug/L)	Proposed Method	RL (ug/L)	MDL (ug/L)
			<i>TestAmerica - Irvine</i>		
Hardness	EPA 130.1	-	SM2340B	Calculation based on Ca and Mg	
Beryllium	EPA 200.9	-	EPA 200.8	0.5	0.25
Cyanide	SM4500-CN-C or -I	-	SM45000 CN E	0.005	0.00025
TAME,DIPE,ETBE, TBA	EPA 1625	-	SW-846 8260B	0.5	0.25
Ethanol, Methanol	EPA 1625	-	SW-846 8015B_DAI	500	250
Electrical Conductivity	EPA 120.1	-	SM2510B	1umhos/cm	1umhos/cm
Total Dissolved Solids	-	-	SM2540C	0.01	0.005
Dissolved Oxygen	-	-	SM4500_O_G	0.001	0.001
Calcium	-	-	EPA 200.7	100	50
Magnesium	-	-	EPA 200.7	20	10



## De la Cruz, Marcos@Waterboards

---

**From:** Jennifer Lagerbom <jennifer@mccampbell.com>  
**Sent:** Thursday, September 06, 2018 9:57 AM  
**To:** De la Cruz, Marcos@Waterboards  
**Subject:** concerns regarding methodology changes in Tentative Order No. R2-2018-00XX

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

McCampbell Analytical, Inc.

Marcos,

**Comment1**

I am concerned about the methods that are no longer acceptable for Selenium analysis, specifically E200.8. McCampbell Inc. no longer uses a GFAA for metals other than Mercury. We employ 3 ICP-MS instruments for the majority of metals analysis. Our default analysis of NON Drinking Water samples is ICP-MS with Collision Cell technology for E200.8 and SW6020. It is our professional opinion that this technology is far superior to the E200.9 that is suggested. If the goal is to reach a wider certified laboratory pool than these two methods selected seem to reduce the certified labs quite a bit.

**Comment 2**

On a similar note the method suggested for Chromium III (E1639) is outdated plus it is not part of the CA ELAP FOT list, so even if we did or wanted to do it, method 1639 is not offered by CA ELAP. How is a permittee supposed to find a certified lab if there is nothing to certify against?

Thank you for your time.

Best regards,

*Jennifer Lagerbom*

Project Manager

McCampbell Analytical Inc.

1534 Willow Pass Road

Pittsburg, CA 94565

925.252.9262 ext 254

Limited hours in the Lab M-F 8:30-2:30

[www.mccampbell.com](http://www.mccampbell.com)

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September 28, 2018

Pioneer Technologies Corporation

Macros De la Cruz  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

**Subject:** Comments on the Draft Amendment to the National Pollutant Discharge Elimination System General Permit (CAG912002 - Order No. R2-2017-0048)

Dear Mr. De la Cruz:

On behalf of the Lorentz Barrel and Drum Shallow Groundwater Task Force (SGWTF) which operates a facility located in San Jose, California (Site) regulated under National Pollutant Discharge Elimination System General (NPDES) Permit (CAG912002 - Order No. R2-2017-0048), I am submitting this letter in support of the proposed amendment to the order (Amendment).

The SGWTF has operated a groundwater pump-and-treatment facility for volatile organic compounds (VOCs) at the Lorentz Barrel and Drum Site under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for nearly 30 years. Based on consistent, quarterly groundwater sampling events at the facility, selenium is not a constituent of concern, and effluent concentrations are consistent with background groundwater concentrations. Multiple selenium samples have been collected from the receiving water (i.e., Coyote Creek) with no discernable difference in selenium concentrations between samples collected immediately upstream and downstream of the discharge point. Furthermore, area-wide untreated groundwater naturally discharges to Coyote Creek throughout the year (even during low-stream flows in the summer/fall). Therefore, discharges from the pump-and-treatment facility do not impact selenium loading to Coyote Creek – especially at the low effluent flow rate of less than 25 gallons per minute.

Overall, the SGWTF supports the proposed Amendment to Order No. R2-2017-0048. We appreciate the opportunity to comment on the Amendment, and our specific comments are presented below:

**Comment 1**

1. Page F-4, paragraph 2 states, "...South San Francisco Bay fish meet the new selenium criteria, the fish in tributary creeks likely also meet the new criteria. Therefore, the current selenium effluent limits will likely be removed from the Permit when the State (through the Regional Water Board or State Water Board) promulgates U.S. EPA's newly recommended water quality criteria as water quality objectives, because there is no reasonable potential for discharges covered by the Permit to cause or contribute to exceedances of the new criteria."

Comment: We agree that the most current science indicates that selenium in South Francisco Bay (and its associated tributaries) does not impact public health and the environment. The SGWTF supports the Board's position to remove the selenium effluent limits from the Permit when new criteria are promulgated by the State/U.S. EPA. In addition, the SGWTF recommends that the Board remove the selenium effluent limits from the Permit as soon as reasonably possible (i.e., during this Permit term) after the new criteria are promulgated, and not wait until the next permit term (i.e., 5-Years from now) to remove effluent criteria for selenium.





**Comment 2**

2. Page F-4, paragraph 3 states, "Dischargers in the southern part of the Region would otherwise need to address their relatively high selenium discharge concentrations, which result from natural groundwater conditions throughout Santa Clara County."

Comment: The information regarding selenium being present in effluents due to natural groundwater conditions is consistent with the nearly 30-year historical record from our site.

**Comment 3**

3. Page F-4, paragraph 3 states, "Such treatment upgrades [for selenium] would be unreasonable, since they are unnecessary to protect water quality, would be extremely costly, and may only serve to move dissolved selenium from one discharge location to another. No available technology (including those typically employed at municipal wastewater treatment plants) actually breaks down selenium."

Comment: We agree with these statements. Treating selenium would be costly, with virtually no benefit to the environment (i.e., high cost/low benefit). The scientific data referenced<sup>1</sup> in Appendix F of the Addendum demonstrate that current selenium discharges in the South Bay area are not adversely impacting human health and the environment. The resources potentially used to treat selenium could be used to more cost-effectively address other environmental concerns.

**Comment 4**

4. Page F-4, paragraph 4 states, "For the reasons explained above, this Order reduces the selenium monitoring frequency to once each permit term, removes the requirement to collect and analyze a confirmation sample after finding a selenium effluent limit violation, and eliminates the requirement to contain effluent onsite or shut down the extraction and treatment system following a second violation."

Comment: We support this approach and agree that decreasing the monitoring frequency for selenium to once each permit term is protective of human health and the environment, based on the most current scientific data.

**Comment 5**

5. Page F-4, paragraph 4 states, "This Order does not rescind the selenium effluent limits outright because the State Implementation Policy still requires them."

Comment: Since the Board has already determined that selenium in South Francisco Bay (and its associated tributaries) does not impact public health and the environment, we recommend that the Board implement policy that stipulates that only the minimum penalty be imposed, should a facility's effluent exceed the selenium criteria specified in the Permit.

We appreciate this opportunity to provide comments on the proposed Amendment. If you have any questions regarding these comments, please contact me at 360.570.1700.

Sincerely,



Chris Waldron, P.E.

---

<sup>1</sup> U.S. Geological Survey's report *Status of Selenium in South San Francisco Bay – A Basis for Modeling Potential Guidelines to Meet National Tissue Criteria for Fish and a Proposal Wildlife Criterion for Birds* (2018).





Marcos De La Cruz  
San Francisco Bay Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Comments to Proposed Amendment to Order #R2-2017-0048.

Dear Mr. De La Cruz:

Tamalpais Environmental Consultants (TEC) has prepared these comments on behalf of the owners of the facility at 150 Almaden Blvd. in San Jose, California. We would like to take this opportunity to comment and lend our support for the proposed amendment to NPDES Order R2-2017-0048.

The foundation dewatering system for the building includes two sumps to remove groundwater from the lowest level of the parking garage. Groundwater contains small amounts of tetrachloroethylene (PCE) and low levels of several naturally-occurring metals. Groundwater flows into each sump at very high rates, with peak flow rates over 450 gallons per minute (gpm) for the East Sump and 350 gpm for the West Sump. These systems cannot be shut down for any significant length of time or the subsurface parking garage will flood.

The PCE concentrations in these sumps are very low, with the influent for the West Sump at 2.4  $\mu\text{g/L}$  and the influent for the East Sump at 0.9  $\mu\text{g/L}$  during the latest monitoring event in August 2018. The treatment systems currently use 22 carbon vessels with 1,000 pounds of carbon in each vessel to remove PCE. The vessels are configured in a single treatment stage prior to discharge to the storm drain and Guadalupe River under the current NPDES permit.

The treatment systems are currently managed to remove PCE to below 0.8  $\mu\text{g/L}$ . Significant additional costs will be expended to comply with the change of the standard from 0.8  $\mu\text{g/L}$  to 0.5  $\mu\text{g/L}$  in the new permit. TEC expressed concern in previous comments that this small change in the discharge limit for PCE created a significant additional burden for the discharger. More frequent carbon changeouts will be required to meet the new standard, but the laboratory has been able to consistently estimate concentrations below the standard detection limit of 0.5  $\mu\text{g/L}$  to allow for the ongoing use of a single stage of treatment for both systems.

The carbon treatment systems are effective for removal of PCE, but do not remove any of the naturally-occurring metals present in the discharge. TEC implemented a pilot test using organo-clay and zeolite materials in some vessels to evaluate metals removal. These materials were not effective at removing selenium, which is currently the only metal above the pending effluent limitations for metals. There are other potential options



October 1, 2018

to remove selenium, but their effectiveness is often limited at normal pH. It is not feasible to modify the pH of these discharges due to the high flow rates and increased risk to the environment with any system malfunctions.

**Comment 1**

**Comment 1:** The proposed amendment to reduce selenium treatment requirements is essential for our treatment systems to comply with the pending NPDES permit. No viable alternatives for selenium treatment have been identified, particularly for the high flow rates at the facility without the ability to shut off the foundation dewatering systems.

If you have any questions regarding the information presented in this letter, please contact me at (415) 456-5084.

Sincerely,

A handwritten signature in black ink, appearing to read 'Aaron O'Brien', written over a horizontal line.

Aaron O'Brien, PE  
President

Copies:

Julie Garcia, CBRE  
Richard Maxwell, Roux Associates



## Appendix C

### Response to Comments



**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

**RESPONSE TO WRITTEN COMMENTS**

on Tentative Order for  
Amendment of Order No. R2-2017-0048 (NPDES No. CAG912002) for discharges from  
treatment facilities of groundwater polluted by VOCs and Fuel  
San Francisco Bay Region

The Regional Water Board received written comments on a tentative order distributed for public comment on August 29, 2018, from the following parties:

	<u>Page</u>
1. FMC Corporation (September 24, 2018) .....	1
2. McCampbell Analytical, Inc. (September 6, 2018) .....	4
3. Pioneer Technologies Corporation (October 1, 2018) .....	4
4. Park Center Plaza Investors, L.P. (October 1, 2018) .....	5

Regional Water Board staff has summarized the comments, shown below in *italics* (paraphrased for brevity), and followed each comment with staff's response. For the full content and context of the comments, please refer to the comment letters.

All revisions to the tentative order are shown with underline text for additions and strikethrough ~~text~~ for deletions.

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**FMC Corporation (FMC)**

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***FMC Comment 1:*** *FMC states that several analytical methods in the tentative order are outdated, and most analytical laboratories are not certified to conduct them.*

**Response:** We agree and revised Table E-2 of the tentative order as follows. We also added footnotes 10 through 15 (revised here to 11 through 16), which were inadvertently omitted from the tentative order (they appear in Order No. R2-2017-0048).

**Table E-2. Minimum Monitoring Requirements**

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 <i>n</i> ) <sup>[1]</sup>	Effluent and Reclaimed Water (EFF- <i>n</i> , REC- <i>n</i> ) <sup>[1]</sup>	Receiving Water (RSW- <i>n</i> U, RSW- <i>n</i> D)
Flow	GPM/GPD/MGM	--	Continuous	--	Continuous <sup>[2]</sup>	--
:	:	:	:	:	:	:
Cadmium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	[6]	[6]	[3]
Chromium III <sup>[7]</sup>	µg/L	<del>EPA 1639</del> --	Grab	[6]	[6]	[3]

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 <i>n</i> ) <sup>[1]</sup>	Effluent and Reclaimed Water (EFF- <i>n</i> , REC- <i>n</i> ) <sup>[1]</sup>	Receiving Water (RSW- <i>n</i> U, RSW- <i>n</i> D)
Chromium VI <sup>[7]</sup>	µg/L	EPA 218.6 or EPA 7199	Grab	[6]	[6]	[3]
Copper, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	[6]	[6]	[3]
:	:	:	:	:	:	:
Nickel, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	[6]	[6]	[3]
Selenium, Total Recoverable <sup>[9]</sup>	µg/L	EPA 200.9 or <del>EPA 270.2</del> EPA 200.8	Grab	Once	Once	[3]
Silver, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	[6]	[6]	[3]
:	:	:	:	:	:	:
Cyanide, Total	µg/L	SM 4500-CN – D or E	Grab	[6]	[6]	--
Volatile Organic Compounds (VOCs) <sup>[9][10]</sup>	µg/L	EPA 8260B (full list)	Grab	[6]	[6]	[3]
Semi-volatile organic compounds (SVOCs) excluding polynuclear aromatic hydrocarbons (PAHs) <sup>[5],[9][11]</sup>	µg/L	EPA 8270C	Grab	SP, then 1/Quarter	SP, then 1/Month	--
PAHs <sup>[5],[9]</sup>	µg/L	EPA 610 or <u>EPA 8270D</u>	Grab	SP, then 1/Quarter	SP, then 1/Month	[3]
TPHs as Gasoline <sup>[5],[11][12]</sup>	µg/L	EPA 8260B Modified or EPA 8015B Modified	Grab	SP, then 1/Quarter	SP, then 1/Month	[3]
TPHs as Diesel <sup>[5],[11][12]</sup>	µg/L	EPA 8015B Modified	Grab	SP, then 1/Quarter	SP, then 1/Month	[3]
TPHs other than Gasoline and Diesel <sup>[5],[11][12]</sup>	µg/L	EPA 8015B Modified	Grab	SP, then 1/Quarter	SP, then 1/Month	[3]

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 <i>n</i> ) <sup>[1]</sup>	Effluent and Reclaimed Water (EFF- <i>n</i> , REC- <i>n</i> ) <sup>[1]</sup>	Receiving Water (RSW- <i>n</i> U, RSW- <i>n</i> D)
Tertiary Amyl Methyl Ether (TAME), DiIsopropyl Ether (DIPE), Ethyl Tertiary Butyl Ether (ETBE), Tertiary Butyl Alcohol (TBA), Ethanol, and Methanol <sup>[5]</sup>	µg/L	<del>EPA 1625</del> Modified EPA 8260B	Grab	SP, then 1/Year	SP, then 1/Year	--
All other pollutants such as foaming agents <sup>[+2][13]</sup>	various	--	Grab	SP, then 1/Month, then 1/Quarter, then 1/Year <sup>[+3][14]</sup>	SP, then 1/Month, then 1/Quarter, then 1/Year <sup>[+3][14]</sup>	[3]
Acute Toxicity	% survival	See MRP section V	Grab	--	1/Quarter, then 1/Year <sup>[+4][15]</sup>	--
Standard Observations	--	--	--	--	SP, then 1/Month <sup>[+5][16]</sup>	[3]

⋮

Footnotes:

⋮

<sup>[6]</sup> VOCs, metals and cyanide shall be monitored as follows: ...

<sup>[7]</sup> ~~Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 µg/L). Total chromium shall be analyzed using U.S. EPA method 200.8. Analysis for chromium III shall be obtained from the difference of the analytical results for total chromium and chromium VI.~~

<sup>[8]</sup> If the discharge exceeds the effluent limitation for mercury, the Discharger shall re-sample and analyze using ultra-clean techniques as described in U.S. EPA methods 1669 and 1631 to eliminate the possibility of artefactual contamination of the sample.

<sup>[9]</sup> Monitoring shall be performed using low-level detection techniques to achieve reporting levels below effluent limitations.

~~<sup>[9][10]</sup> The analytes shall include those listed in *USEPA SW-846 Test Method 8260 B: Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (December 1996) except internal standard and surrogate compounds. Where appropriate, monitoring of pollutants with effluent limitations shall be performed using low-level detection techniques from any U.S. EPA method 8260 to achieve reporting levels below effluent limitations.~~

~~<sup>[+0][11]</sup> Monitoring of bis(2-ethylhexyl)phthalate shall be performed using ultra clean sampling techniques for re-evaluation during future permit reissuance.~~

~~<sup>[+1][12]</sup> TPHs shall be analyzed without silica-gel cleanup.~~

~~<sup>[+2][13]</sup> All other pollutants, such as foaming agents shall be monitored at the influent and effluent if known to be present in the influent~~

~~<sup>[+3][14]</sup> After the start-up phase, parameters shall be monitored monthly for the first year of operation, quarterly for the second year of operation, and annually thereafter.~~

~~<sup>[+4][15]</sup> Acute toxicity shall be monitored quarterly for the first year of operation and annually thereafter.~~

~~<sup>[+5][16]</sup> For reclaimed water only.~~

---

**McC Campbell Analytical, Inc. (McC Campbell)**

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***McC Campbell Comment 1:*** *McC Campbell recommends using analytical method EPA 200.8 for selenium instead of EPA 200.9 because it is more readily available and relies on superior technology.*

**Response:** We agree. See our response to FMC comment 1.

***McC Campbell Comment 2:*** *McC Campbell states that analytical method EPA 1639 for chromium is outdated and cannot be certified by the California Environmental Laboratory Accreditation Program.*

**Response:** We agree. See our response to FMC Comment 1.

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**Pioneer Technologies Corporation (Pioneer)**

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***Pioneer Comment 1:*** *Pioneer concurs with our plan to remove selenium effluent limits from the permit when new selenium criteria are promulgated. Pioneer recommends removing selenium effluent limits from the permit as soon as reasonably possible.*

**Response:** We acknowledge the comment. No change is necessary.

***Pioneer Comment 2:*** *Pioneer agrees that relatively high selenium concentrations from dischargers in Santa Clara County are due to natural background conditions and states that it is consistent with their 30-year historical site record.*

**Response:** We acknowledge the comment. No change is necessary.

***Pioneer Comment 3:*** *Pioneer states that selenium treatment would be costly and have no additional benefit to the environment considering that current selenium discharges in Santa Clara County are not adversely affecting human health or the environment.*

**Response:** We acknowledge the comment. No change is necessary.

***Pioneer Comment 4:*** *Pioneer concurs with the proposed reduction of selenium monitoring requirements.*

**Response:** We acknowledge the comment. No change is necessary.

***Pioneer Comment 5:*** *Pioneer requests that Regional Water Board stipulate that only minimum penalties will be imposed if selenium effluent limits are exceeded.*

**Response:** We disagree. If and when any violation occurs, the Regional Water Board will exercise its enforcement discretion in accordance with the State Water Board's Enforcement Policy.

---

**Park Center Plaza Investors, L.P. (Park Center)**

---

***Park Center Comment 1:** Park Center considers the proposed amendment to be essential for its treatment systems to comply with the permit.*

**Response:** We acknowledge the comment. No change is necessary.