CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
320 West 4th Street, Suite 200, Los Angeles, CA 90013
(213) 576-6600 • Fax (213) 576-6660
http://www.waterboards.ca.gov/losangeles/

ORDER NO. R4-2015-0119-A0X
AMENDING WASTE DISCHARGE REQUIREMENTS (WDRs) AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR

THE CITY OF LOS ANGELES
TERMINAL ISLAND WATER RECLAMATION PLANT

The California Regional Water Quality Control Board, Los Angeles Region (hereinafter Regional Water Board), finds:

1. The Regional Water Board issued Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit, Order No. R4-2015-0119, for the discharge of Terminal Island Water Reclamation Plant's (TIWRP's) tertiary-treated municipal wastewater to the Los Angeles Outer Harbor. This permit was adopted by this Regional Water Board on June 11, 2015.

2. The City of Los Angeles owns and operates the TIWRP, a Publicly-Owned Treatment Works with a design capacity of 30 million gallons per day (MGD) located in San Pedro, CA. The City discharges tertiary-treated wastewater from the TIWRP to the Los Angeles Outer Harbor.

3. On July 13, 2015, the City of Los Angeles (City) submitted an e-mail requesting clarification and modifications to several sections of Order No. R4-2015-0119 and its associated attachments.

4. On July 21, 2015, the City submitted an e-mail including an additional seven comments to add to the list of clarifications and modifications sent on July 13, 2015.

5. On July 29, 2015, the Regional Water Board sent an e-mail response to the City, clarifying the intentions of each requirement in Order No. R4-2015-0119 discussed in the July 22, 2015, letter. The clarifications in the e-mail only served as an interpretation of the regulations provided in the Order.

6. On August 11, 2015, the City submitted an e-mail including an additional four comments to add to the list of clarifications and modifications.

7. On August 13, 2015, representatives from the City and from the Regional Water Board held a teleconference to discuss the requested clarifications and modifications.

8. Title 40 of the Code of Federal Regulations (40 CFR) section 122.63(a) permits the Executive Officer to modify a permit to make minor modifications such as typographical errors; however, some of the requested modifications are not considered minor and therefore require Regional Water Board approval. This amendment serves to revise Order No. R4-2015-0119 based on the City's requests to provide more consistency and clarity to the regulations

TENTATIVE

The Regional Water Board, in a public hearing, heard and considered all testimony pertinent to this matter. All Orders referred to above, Regional Water Board files on this matter, and records of hearings and testimony therein are included in the administrative record for this matter.

IT IS HEREBY ORDERED that Order No. R4-2015-0119, adopted by this Regional Board on June 11, 2015, is hereby amended as follows (additions are underlined, deletions are lined through):

1. **WDRs page 28-29, Section VII.J, and MRP page E-16, Section VI.A.1.** The approved dilution ratio is 65:1, as stated in Section I.F. of the Fact Sheet ; however, the in-stream waste concentration (IWC) described in the Order is not consistent with this dilution ratio. The IWC is calculated by dividing 1 by the dilution ratio plus 1. The previous permit included an IWC of 1.6%, which is the result of dividing 1 by 62, since the dilution ratio was previously 61:1. Order No. R4-2015-0119 incorrectly carried over the IWC from the previous permit. The correct IWC is calculated by dividing 1 by 65 plus 1, which is 1.5%. Order R4-2015-0119 shall read as follows:

   WDR page 28-29, Section VII.J, first 3 sentences of paragraph 4.
   The chronic toxicity MDEL and MMEL are set at the IWC for the discharge (1.5~~6~~% effluent) and expressed in units of the TST statistical approach ("Pass" or "Fail", "Percent Effect"). All NPDES effluent compliance monitoring for the chronic toxicity MDEL and MMEL shall be reported using only the 1.5~~6~~% effluent concentration and negative control, expressed in units of the TST. The TST hypothesis (Ho) (see above) is statistically analyzed using the IWC (1.5~~6~~%) and a negative control.

   MRP page E-16, Section VI.A.1.
   The chronic toxicity IWC for this discharge is 1.5~~6~~ percent effluent.

2. **MRP Section IV.A, Table E-2, page E-12, and Section V.A, Table E-3, page E-13 and E-14.** Table E-2 and E-3 shall be modified as described below:

   a. In Table E-3, total chromium is classified as a priority metal under the category "Remaining Priority Metals" and identified as a grab sample; however, in Table E-2, total chromium is classified as a priority pollutant under the category "Remaining EPA priority pollutants excluding asbestos" and identified as a 24-hour composite. In addition, chromium III was not included in either table even though it is required by the California Toxics Rule. Total chromium and chromium VI shall both be grab samples. Chromium III may be calculated by subtracting chromium VI from total chromium.

   b. The Order contains an annual final effluent limitation for total PCBs. PCBs as congeners have an annual monitoring requirement, while total PCBs have a different monitoring frequency. Since PCBs as congeners are a component of total PCBs, it is not possible to calculate Total PCBs on a monthly basis. The frequency of monitoring for total PCBs shall be changed to annually as outlined in Table E-3 below.

TENTATIVE

Table E-2. Influent Monitoring at INF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chromium III (Total Chromium – Chromium VI)	µg/L	Calculated	semiannually	2
Remaining EPA priority pollutants[4] excluding asbestos	µg/L	24-hour composite; grab for VOCs, ~~and~~ Chromium VI, and Total Chromium	semiannually	2

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Total PCBs[9]	µg/L and g	24-hour composite	annually~~monthly~~	6
Chromium III (Total Chromium – Chromium VI)	µg/L	Calculated	semiannually	6
Remaining EPA Priority Pollutant Metals	µg/L	~~grab/~~ 24-hour composite; grab for Total Chromium	quarterly	6

3. **MRP Section III, page E-7, Table E-1, and MRP Section IX.B.1, page E-24.** Monitoring station HW-07 was removed from the MRP because the station is currently being monitored as part of the Municipal Separate Storm Sewer System (MS4) permit issued to the City. Since this monitoring requirement was removed, any reference to HW07 should be removed for consistency as follows:

   MRP Section III, page E-7, Table E-1.

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
Microbiological Monitoring Stations		
	~~HW07~~	~~33.722500 N, 118.270000 W~~

   MRP Section IX.B.1, page E-24

   1. Microbiological monitoring shall be conducted at ~~7~~6 stations (~~HW07,~~ HW16, HW29, HW33, HW49, HW56, and HW64, Figure E-2) as follows:

4. **MRP Section IX.D.1, page E-27, Table E-9.** The correct chronic toxicity sampling locations are listed in Section III of the MRP, Table E-1. However, Table E-9 included the old stations. For consistency, MRP Section IX.D.1, Table E-9 shall be corrected to read as follows:

TENTATIVE

Table E-9. Chronic Toxicity Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chronic Toxicity[23] (HW20 and HW62 ~~HW24 and HW43~~)	Pass or Fail, % Effect (TST)	mid-depth	quarterly	TST

5. **MRP Section IX.E.1, page E-28 and E-29, Table E-10, and Section V.A, page E-13, Table E-3.**
For consistency, the following modifications shall be made to Table E10:

   a. The City has requested that several parameters in Table E-10 be reported in µg/L to make it consistent with the previous permit and to be compatible with the City's current databases that manage the data.

   b. In Table E-10, "Total PCBs" for the sediment monitoring refers to the same parameters that are listed in Table E-3 as "PCBs as congeners" for the final effluent monitoring. In addition, "PCB Derivatives" in Table E-10 includes the same PCBs listed as "PCBs as aroclors" in Table E-3. "Total PCBs" shall be modified to read "PCBs as congeners", and "PCB Derivatives" shall be modified to read "PCBs as aroclors" in table E-10.

   c. The pesticides to be monitored in tables E-3 and E-10 are identical; however, the parameter name is listed differently in both tables. For consistency, the parameter name for "Organophosphate Pesticides" shall be "Pesticides," and footnote 12 shall be included in Table E-10.

   d. "DDT Derivatives" refers to each DDT compound that shall be reported individually, whereas "Total DDT" refers to the sum of all "DDT Derivatives". "Total DDT" is not defined in Table E-3 but the constituents to be monitored shall be consistent with the CCMRP, as clarified in modification #9 of this amendment. Total DDT is also not defined in Table E-10 so for clarity, Table E-10 shall specify that "Total DDT" is the sum of all "DDT Derivatives."

   e. For the purposes of final effluent monitoring, "Total PAHs" shall be consistent with the approved Coordinated Compliance Monitoring and Reporting Plan (CCMRP), as clarified in modification #9 of this amendment. For the purposes of sediment monitoring, "Total PAH" shall include the sum of the "PAH Derivatives" defined in Appendix I of the 2012 California Ocean Plan and listed in footnote 29, Table E-10, page E-29.

   f. The required chlorinated hydrocarbons that shall be monitored for compliance are not identified in Table E-10 and include aldrin, dieldrin, endrin, chlordane, heptachlor, heptachlor epoxide, endosulfan I, endosulfan II, and endosulfan sulfate. Heptachlor, heptachlor epoxide, endosulfan I, endosulfan II, and endosulfan sulfate, are the only chlorinated hydrocarbons not yet included in Table E-10 so the "Chlorinated Hydrocarbons" category shall be removed and these constituents shall be added to Table E-10.

Table E-10. Harbor Bottom Monitoring Requirements

Constituent	Units	Sample Type	Frequency
Aldrin	µ~~m~~g/kg	Grab	Annually
Dieldrin	µ~~m~~g/kg	Grab	Annually
Endrin	µ~~m~~g/kg	Grab	Annually
Hexachlorocyclohexane	µ~~m~~g/kg	Grab	Annually
Chlordane[24]	µ~~m~~g/kg	Grab	Annually
Total DDT (Sum of all DDT Derivatives)	µ~~m~~g/kg	Grab	Annually
DDT Derivatives[25]	µ~~m~~g/kg	Grab	Annually
~~Total~~ PCB~~[26]~~s (Polychlorinated Biphenyls) as congeners[26]	µ~~m~~g/kg	Grab	Annually
PCBs as aroclors ~~Derivatives~~[27]	µ~~m~~g/kg	Grab	Annually
Toxaphene	µ~~m~~g/kg	Grab	Annually
Total PAH[28] (Polycyclic Aromatic Hydrocarbons, shall include the sum of the PAH Derivatives)	mg/kg	Grab	Annually
~~Orthophosphate (OP)~~ Pesticides[12]	µ~~m~~g/kg	Grab	Annually
~~Chlorinated Hydrocarbons~~	~~mg/kg~~	~~Grab~~	~~Annually~~
Heptachlor	µg/kg	Grab	Annually
Heptachlor epoxide	µg/kg	Grab	Annually
Endosufan I	µg/kg	Grab	Annually
Endosulfan II	µg/kg	Grab	Annually
Endosulfan sulfate	µg/kg	Grab	Annually

6. **WDR Section IV.A, page 6, Table 4, & MRP Section V.A, page E-14, Table E-3.** The final effluent limitation and monitoring for "2,3,7,8-TCDD (Dioxin)" should be "2,3,7,8-TCDD equivalents" because compliance with this limit is determined using the equivalence approach described in Section VII.O, page 30 of the Order. Table 4 of the WDR and Table E-3 of the MRP shall read as follows for 2,3,7,8-TCDD:

Table 4. Final Effluent Limitations

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instant-aneous Minimum	Instant-aneous Maximum	Annual Average
2,3,7,8-TCDD[5] Equivalents ~~(Dioxin)~~	pg/L	0.014	--	0.027	--	--	--
	lbs/day[6]	3.5×10^{-6}	--	6.8×10^{-6}	--	--	--

TENTATIVE

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
2,3,7,8-TCDD Equivalents ~~(dioxin)~~	pg/L	24-hour composite	Quarterly	[6]

7. **MRP Section V.A, page E-14, Table E-3,and Section IV.A, page E-12, Table E-2.** Table E-2 and E-3 of the MRP identify the pesticides to be monitored as those six constituents referred to in 40 CFR 125.58(m); however, 40 CFR 125.58(m) refers to industrial processes and the correct reference is 40 CFR 125.58(p). Footnote 3 and 12 on page E-12 and E-14 of the MRP shall read as follows:

   [12] Pesticides are, for the purposes of this order, those six constituents referred to in 40 CFR, Part 125.58(p~~m~~) (demeton, guthion, malathion, ~~M~~methoxychlor, mirex, and parathion).

8. **WDRs Section IV.A, Table 4, page 7 and Monitoring and Reporting Program (MRP) Section V.A, page E-13, Table E-3.** For final effluent monitoring requirements and for the final effluent limitations that serve to ensure compliance with the Harbor Toxics Total Maximum Daily Load (TMDL) Waste Load Allocations (WLAs), such as Total PCBs, DDTs, and PAHs, the City shall refer to the CCMRP approved by TMDL staff of the Regional Water Board on June 06, 2014, and any subsequent revisions as approved by the Executive Officer. Tables 17 and 18 of the CCMRP (see attachments for reference in this amendment only) list the constituents that shall be monitored for compliance with Total PCBs, PAHs, and DDTs. In addition, the monitoring for copper, lead, zinc, Total PAH, Total DDT, and Total PCBs shall begin on the effective date of the Order. Since these final effluent limitations do not take effect immediately, monitoring for these parameters shall be quarterly until the final effluent limitations do take effect; at which point the monitoring shall be as listed in Table E-3. The effective date of the TMDL WLA-based final effluent limitations, for the pollutants listed above, is contingent on the reconsideration of the Harbor Toxics TMDL WLAs as well as the outcome of the special studies approved by the Executive Officer. The final sentence in footnote 9 of the WDR specifically states this condition:

   "…The effective date of the final effluent limitations based on the Harbor Toxics TMDL will be determined after the reconsideration of the TMDL WLAs and will consider the timing for any remedies, if applicable."

   For clarity, the following modifications shall be made to Table 4 and Table E-3:

   WDRs Section IV.A, Table 4, page 7. Footnote 9 shall read as follows:

   [9] The Harbor Toxics TMDL assigns concentration-based WLAs to some responsible parties and mass-based WLAs to others. The WLAs assigned to the Terminal Island WRP are mass-based. The constituents to be monitored for each parameter shall be consistent with the Coordinated Compliance Monitoring and Reporting Plan approved by the Regional Water Board on June 06, 2014, and any subsequent revisions as approved by the Executive Officer. The monitoring for these constituents shall begin on the effective date of the Order and the

TENTATIVE

frequency shall be quarterly until the final effluent limitations take effect; at which point the monitoring shall be as listed in Table E-3 of the MRP. The TMDL may be modified when the TMDL WLAs are reconsidered in 2018. Studies may be conducted to determine the portion of the discharged pollutants deposited on bed sediment. This permit requires that the City submit a work plan and complete a study prior to the 2018 reconsideration if the City wishes there to be further consideration of the impact of their discharge on adjacent sediments and revisions to WLAs. The results of any such Executive Officer approved studies shall be evaluated at the TMDL reconsideration (Item 10 of the Harbor TMDL Implementation Schedule) to modify these WLAs as appropriate. If a revised WLA is warranted and is fully approved through the basin planning process, the effluent limit(s) can then be revised in the permit. The effective date of the final effluent limitations based on the Harbor Toxics TMDL will be determined after the reconsideration of the TMDL WLAs and will consider the timing for any remedies, if applicable.

MRP Section V.A, page E-13, Table E-3. Footnote 9 shall read as follows:

[9] M~~onthly m~~onitoring for this constituent is necessary to comply with the Harbor Toxics TMDL WLA~~.~~ and shall begin on the effective date of the Order; however, only quarterly monitoring is required for this constituent until the final effluent limitations take effect; at which point the monitoring shall be as listed in Table E-3. The mass-based results shall be reported as both a monthly average (where appropriate) and a running annual average. The constituents to be monitored for each parameter shall be consistent with the Coordinated Compliance Monitoring and Reporting Plan approved by the Regional Water Board June 06, 2014, and any subsequent revisions as approved by the Executive Officer.

9. **MRP Section III, page E-8, Table E-1, and MRP Section XI.B.1, page E-36.** The Harbor Toxics sampling stations come from the CCMRP. The City must monitor the receiving waters as required in Order No. R4-2015-0119 and in the approved CCMRP. If any of the sample locations and monitoring requirements between this Order and the CCMRP are identical, the monitoring requirements do not need to be duplicated. In this case, the sampling results may be submitted in both the CCMRP and NPDES reports, in lieu of duplicative monitoring. There are two separate monitoring and reporting requirements related to the CCMRP in the Order. The City is required to conduct all monitoring and reporting for all stations in the CCMRP, and submit the final report no later than March 03, 2016. The City is also required to conduct all monitoring and reporting for Harbor Toxics TMDL Sampling Stations ID #8 and #9, and submit the results from these two stations in the NPDES compliance reports. For clarity, the MRP shall be modified as follows:

Paragraph 1, MRP Section XI.B.1, page E-36.

The Permittee shall follow the Coordinated Compliance Monitoring and Reporting Plan submitted to the Regional Water Board and approved by the Executive Officer of the Regional Water Board on June 06, 2014. The first annual report under this monitoring program, including all results for all stations outlined in the CCMRP, shall be submitted to the Regional Water Board as soon as the data become available but no later than March 03, 2016. In addition, the monitoring results for Harbor Toxics TMDL Sampling Locations ID # 8 and #9 shall be submitted with the NPDES annual reports.

10. **MRP Section XI.C.3, page E-37 and E-38, Table E-13.** If quarterly, semiannual, or annual monitoring has not been completed by the effective date of Order No. R4-2015-

TENTATIVE

0119, and the Monitoring Period for this Order begins on a date following the effective date of the permit, the monitoring requirements in Order R4-2010-0071 apply. For the monitoring period from July 1 to September 30, 2015, the quarterly, semiannual, and annual monitoring requirements in Order R4-2010-0071 shall be effective.

11. **Fact Sheet Section II.C., Table F-2, page F-11 and F-12, and Section IV.C.3., Table F-6, page F-37.** The historic effluent monitoring data in Table F-2 is not consistent with Table F-6 and is incorrect for tetrachloroethylene, toluene, trichloroethylene, 2-chlorophenol, 2,4-dimethylphenol, and phenol. These constituents were not detected between January 1, 2010, and September 30, 2014. The Harbor Bottom Monitoring in Section IX.E. of the MRP requires monitoring of "Detected Priority Pollutants," so the Fact Sheet should be clarified to reflect those priority pollutants that have not been detected. Table F-2 and F-6 shall read as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data at Eff-001

Parameter	Units	Effluent Limitation Order No. R4-2010-0071)			Monitoring Data[2] (From 01/01/10 to 09/30/14)		
		Average Monthly	Ave. Weekly	Max. Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge[3,4]	Highest Daily Discharge
Tetrachloroethylene	µg/L	--	--	--	<0.16~~0.71~~	--	<0.16~~0.71~~
Toluene	µg/L	--	--	--	<0.15~~2.21~~	--	<0.15~~2.21~~
Trichloroethylene	µg/L	--	--	--	<0.16~~0.18~~	--	<0.16~~0.18~~
2-chlorophenol	µg/L	--	--	--	<0.25~~5.28~~	--	<0.25~~5.28~~
2,4-dimethylphenol	µg/L	--	--	--	<0.24~~12.6~~	--	<0.24~~12.6~~
Phenol	µg/L	--	--	--	<0.32~~10.4~~	--	<0.32~~10.4~~

Table F-6. Summary of Reasonable Potential Analysis

CTR No.	Constituent	Applicable water Quality Criteria (C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc. (B) µg/L[14]	RPA Result - Need Limitation?	Reason
39	Toluene	200,000	<0.15~~2.21~~	N/A	No	MEC<C
45	2-chlorophenol	400	<0.25~~5.28~~	N/A	No	MEC<C
47	2,4-dimethylphenol	2,300	<0.24~~12.6~~	N/A	No	MEC<C
54	Phenol	4,600,000	<0.32~~10.4~~	N/A	No	MEC<C

12. This Order shall be attached to the Order it modifies and will be provided to the Permittee. For ease of reference, Regional Water Board staff are also directed to prepare a revised version of the existing Order that reflects the changes made in this Order. The revised version shall be provided to the Discharger and shall bear the appropriate title "Order No. R4-2015-0119 (as Amended by Order No. R4-2015-0119-A01)."

13. The Expiration date, and all other limitations, Requirements, and Provisions of Order No. R4-2015-0119 are unchanged and shall remain in full force and effect.

TENTATIVE

I, Samuel Unger, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an amendment adopted by the California Regional Water Quality Control Board, Los Angeles Region, on October 08, 2015.

_____
Samuel Unger, P.E. Executive Officer

TENTATIVE

TENTATIVE

Attachments

Table 17 and 18 of the Coordinated Compliance Monitoring and Reporting Plan

Table 17

Water Parameters, Analytical Methods, and RLs

Parameter[1]	**Analytical Method**[2]	**Target RL**[3]
Conventionals (mg/L)		
Total Suspended Solids	SM 2540 D	2
Seawater (and Freshwater) Total and Dissolved Metals (µg/L)		
Cadmium	USEPA 6010A/6020/200.8/1640	0.01
Chromium	USEPA 6010A/6020/200.8/1640	0.1
Copper	USEPA 6010A/6020/200.8/1640	0.01
Lead	USEPA 6010A/6020/200.8/1640	0.01
Mercury	USEPA 7470A/245.7/1631	0.0002
Zinc	USEPA 6010A/6020/200.8/1640	0.10
PCB Congeners (ng/L)[4] **– Low Resolution Analytical Methods**		
CL3-PCB-18	USEPA 8270C (SIM or TQ)/625	0.1
CL3-PCB-28	USEPA 8270C (SIM or TQ)/625	0.1
CL3-PCB-37	USEPA 8270C (SIM or TQ)/625	0.1
CL4-PCB-44	USEPA 8270C (SIM or TQ)/625	0.1
CL4-PCB-49	USEPA 8270C (SIM or TQ)/625	0.1
CL4-PCB-52	USEPA 8270C (SIM or TQ)/625	0.1
CL4-PCB-66	USEPA 8270C (SIM or TQ)/625	0.1
CL4-PCB-70	USEPA 8270C (SIM or TQ)/625	0.1
CL4-PCB-74	USEPA 8270C (SIM or TQ)/625	0.1
CL4-PCB-77	USEPA 8270C (SIM or TQ)/625	0.1
CL4-PCB-81	USEPA 8270C (SIM or TQ)/625	0.1
CL5-PCB-87	USEPA 8270C (SIM or TQ)/625	0.1
CL5-PCB-99	USEPA 8270C (SIM or TQ)/625	0.1
CL5-PCB-101	USEPA 8270C (SIM or TQ)/625	0.1
CL5-PCB-105	USEPA 8270C (SIM or TQ)/625	0.1
CL5-PCB-110	USEPA 8270C (SIM or TQ)/625	0.1
CL5-PCB-114	USEPA 8270C (SIM or TQ)/625	0.1
CL5-PCB-118	USEPA 8270C (SIM or TQ)/625	0.1
CL5-PCB-119	USEPA 8270C (SIM or TQ)/625	0.1
CL5-PCB-123	USEPA 8270C (SIM or TQ)/625	0.1
CL5-PCB-126	USEPA 8270C (SIM or TQ)/625	0.1
CL6-PCB-128	USEPA 8270C (SIM or TQ)/625	0.1
CL6-PCB-138	USEPA 8270C (SIM or TQ)/625	0.1
CL6-PCB-149	USEPA 8270C (SIM or TQ)/625	0.1
CL6-PCB-151	USEPA 8270C (SIM or TQ)/625	0.1

Parameter[1]	Analytical Method[2]	Target RL[3]
CL6-PCB-153	USEPA 8270C (SIM or TQ)/625	0.1
CL6-PCB-156	USEPA 8270C (SIM or TQ)/625	0.1
CL6-PCB-157	USEPA 8270C (SIM or TQ)/625	0.1
CL6-PCB-158	USEPA 8270C (SIM or TQ)/625	0.1
CL6-PCB-167	USEPA 8270C (SIM or TQ)/625	0.1
CL6-PCB-168	USEPA 8270C (SIM or TQ)/625	0.1
CL6-PCB-169	USEPA 8270C (SIM or TQ)/625	0.1
CL7-PCB-170	USEPA 8270C (SIM or TQ)/625	0.1
CL7-PCB-177	USEPA 8270C (SIM or TQ)/625	0.1
CL7-PCB-180	USEPA 8270C (SIM or TQ)/625	0.1
CL7-PCB-183	USEPA 8270C (SIM or TQ)/625	0.1
CL7-PCB-187	USEPA 8270C (SIM or TQ)/625	0.1
CL7-PCB-189	USEPA 8270C (SIM or TQ)/625	0.1
CL8-PCB-194	USEPA 8270C (SIM or TQ)/625	0.1
CL8-PCB-201	USEPA 8270C (SIM or TQ)/625	0.1
CL9-PCB-206	USEPA 8270C (SIM or TQ)/625	0.1
Chlorinated Pesticides (ng/L)		
alpha-Chlordane (cis-chlordane)	USEPA 8081A/625	0.50
gamma-Chlordane (trans-chlordane)	USEPA 8081A/625	0.50
Oxychlordane	USEPA 8081A/625	0.50
cis-Nonachlor	USEPA 8081A/625	0.50
trans-Nonachlor	USEPA 8081A/625	0.50
Total chlordane[5]	USEPA 8081A/625	--
2,4'-DDD	USEPA 8081A/625	0.50
2,4'-DDE	USEPA 8081A/625	0.50
2,4'-DDT	USEPA 8081A/625	0.50
4,4'-DDD	USEPA 8081A/625	0.50
4,4'-DDE	USEPA 8081A/625	0.50
4,4'-DDT	USEPA 8081A/625	0.50
Dieldrin	USEPA 8081A/625	0.10
Toxaphene	USEPA 8081A/625	2.0

Notes:
High volume alternative sampling techniques may be used to achieve lower reporting limits for these analyses.
1 Specific analytes used for each study conducted for the RMC may vary by waterbody, according to the listings.
2 Laboratories may use different versions of recommended methods (i.e. USEPA 8270C) as long as the QA/QC elements identified in this CCMRP are met.
3 Matrix interference and/or dilutions due to non-target analytes may increase target reporting limits. The method detection limit (MDL) should be at least three times lower than the reporting limit (40 CFR 136) but will vary per instrument by MDL study. Detected data between the MDL and the RL will be reported and flagged by the lab as estimated. Non-detected data may be reported at the MDL.
4 PCB co-elutions will vary by instrument and column, and may increase reporting limits for some congeners.
5 Total chlordane is calculated using the following compounds: alpha-chlordane, gamma-chlordane, oxychlordane, cis-nonachlor, and trans-nonachlor.
µg/L = microgram per liter
ng/L = nanogram per liter
CCMRP = Coordinated Compliance Monitoring and Reporting Plan
CFR = Code of Federal Regulations
DDT = dichlorodiphenyltrichloroethane
DDD = dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethylene
MDL = method detection limit
QA/QC = quality assurance/quality control
RL = reporting limit
SIM = selected ion monitoring
SM = standard method
TMDL = total maximum daily load
PCB = polychlorinated biphenyl
TBD = to be determined
-- = no RL available

Table 18

Sediment Parameters, Analytical Methods, and RLs

Parameter[1,2]	Analytical Method[3]	Target RL[4]
Conventional Parameters		
Total solids (% wet weight)	SM 2540B/USEPA 160.3	0.1
Grain size (% retained)	ASTM D442/SM 2560	1%
Total organic carbon (%)	SM 5310B/USEPA 9060A	0.01% OC
Metals (µg/g or mg/kg)		
Cadmium	USEPA 6010B/6020	0.01
Chromium	USEPA 6010B/6020	0.1
Copper	USEPA 6010B/6020	0.01
Lead	USEPA 6010B/6020	0.01
Mercury	USEPA 6010B/6020/7471A/245.7/1631	0.03
Zinc	USEPA 6010B/6020	0.10
Polycyclic Aromatic Hydrocarbons (ng/g or µg/kg)		
Acenaphthene	USEPA 8270C/8270D - SIM	20
Anthracene	USEPA 8270C/8270D - SIM	20
Biphenyl	USEPA 8270C/8270D - SIM	20
Naphthalene	USEPA 8270C/8270D - SIM	20
2,6-Dimethylnaphthalene	USEPA 8270C/8270D - SIM	20
Fluorene	USEPA 8270C/8270D - SIM	20
1-Methylnaphthalene	USEPA 8270C/8270D - SIM	20
2-Methylnaphthalene	USEPA 8270C/8270D - SIM	20
1-Methylphenanthrene	USEPA 8270C/8270D - SIM	20
Phenanthrene	USEPA 8270C/8270D - SIM	20
Benz[a]anthracene	USEPA 8270C/8270D - SIM	20
Benzo[a]pyrene	USEPA 8270C/8270D - SIM	20
Benzo(e)pyrene	USEPA 8270C/8270D - SIM	20
Chrysene	USEPA 8270C/8270D - SIM	20
Dibenz[a,h]anthracene	USEPA 8270C/8270D - SIM	20
Fluoranthene	USEPA 8270C/8270D - SIM	20
Perylene	USEPA 8270C/8270D - SIM	20
Pyrene	USEPA 8270C/8270D - SIM	20
Organochlorine Pesticides (ng/g or µg/kg) - Low Resolution Analytical Methods		
Total Chlordane[5]	USEPA 8081A/8270C	--
alpha-Chlordane (cis-chlordane)	USEPA 8081A/8270C	0.5
gamma-Chlordane (trans-chlordane)	USEPA 8081A/8270C	0.5
Oxychlordane	USEPA 8081A/8270C	0.5
cis-Nonachlor	USEPA 8081A/8270C	0.5

Parameter[1,2]	Analytical Method[3]	Target RL[4]
trans-Nonachlor	USEPA 8081A/8270C	0.5
Dieldrin[6]	USEPA 8081A/8270C	0.02
Toxaphene[6]	USEPA 8081A/8270C	0.10
2,4'-DDD	USEPA 8081A/8270C	0.5
2,4'-DDE	USEPA 8081A/8270C	0.5
2,4'-DDT	USEPA 8081A/8270C	0.5
4,4'-DDD	USEPA 8081A/8270C	0.5
4,4'-DDE	USEPA 8081A/8270C	0.5
4,4'-DDT	USEPA 8081A/8270C	0.5
PCB Congeners (ng/g or µg/kg)[7] - Low Resolution Analytical Methods		
CL3-PCB-18	USEPA 8270C /8270D-SIM	0.2
CL3-PCB-37	USEPA 8270C/8270D-SIM	0.2
CL4-PCB-44	USEPA 8270C/8270D-SIM	0.2
CL4-PCB-49	USEPA 8270C/8270D-SIM	0.2
CL4-PCB-52	USEPA 8270C/8270D-SIM	0.2
CL4-PCB-66	USEPA 8270C/8270D-SIM	0.2
CL4-PCB-70	USEPA 8270C/8270D-SIM	0.2
CL4-PCB-74	USEPA 8270C/8270D-SIM	0.2
CL4-PCB-77	USEPA 8270C/8270D-SIM	0.2
CL4-PCB-81	USEPA 8270C/8270D-SIM	0.2
CL5-PCB-87	USEPA 8270C/8270D-SIM	0.2
CL5-PCB-99	USEPA 8270C/8270D-SIM	0.2
CL5-PCB-101	USEPA 8270C/8270D-SIM	0.2
CL5-PCB-105	USEPA 8270C/8270D-SIM	0.2
CL5-PCB-110	USEPA 8270C/8270D-SIM	0.2
CL5-PCB-114	USEPA 8270C/8270D-SIM	0.2
CL5-PCB-118	USEPA 8270C/8270D-SIM	0.2
CL5-PCB-119	USEPA 8270C/8270D-SIM	0.2
CL5-PCB-123	USEPA 8270C/8270D-SIM	0.2
CL5-PCB-126	USEPA 8270C/8270D-SIM	0.2
CL6-PCB-128	USEPA 8270C/8270D-SIM	0.2
CL6-PCB-138	USEPA 8270C/8270D-SIM	0.2
CL6-PCB-149	USEPA 8270C/8270D-SIM	0.2
CL6-PCB-151	USEPA 8270C/8270D-SIM	0.2
CL6-PCB-153	USEPA 8270C/8270D-SIM	0.2
CL6-PCB-156	USEPA 8270C/8270D-SIM	0.2
CL6-PCB-157	USEPA 8270C/8270D-SIM	0.2
CL6-PCB-158	USEPA 8270C/8270D-SIM	0.2
CL6-PCB-167	USEPA 8270C/8270D-SIM	0.2

Parameter[1,2]	Analytical Method[3]	Target RL[4]
CL6-PCB-168	USEPA 8270C/8270D-SIM	0.2
CL6-PCB-169	USEPA 8270C/8270D-SIM	0.2
CL7-PCB-170	USEPA 8270C/8270D-SIM	0.2
CL7-PCB-177	USEPA 8270C/8270D-SIM	0.2
CL7-PCB-180	USEPA 8270C/8270D-SIM	0.2
CL7-PCB-183	USEPA 8270C/8270D-SIM	0.2
CL7-PCB-187	USEPA 8270C/8270D-SIM	0.2
CL7-PCB-189	USEPA 8270C/8270D-SIM	0.2
CL8-PCB-194	USEPA 8270C/8270D-SIM	0.2
CL8-PCB-201	USEPA 8270C/8270D-SIM	0.2
CL9-PCB-206	USEPA 8270C/8270D-SIM	0.2

Notes:
1 Specific analytes used for each study conducted for the Ports may vary by waterbody, according to the listings.
2 Units in dry weight unless otherwise noted. Specific analytes used for each study conducted for the Ports may vary by waterbody, according to the listings.
3 Laboratories may use different versions of recommended methods (i.e. USEPA 8270C) as long as the QA/QC elements identified in this CCMRP are met.
4 Matrix interference, total solid concentrations and/or dilutions due to non-target analytes may increase target reporting limits. The method detection limit (MDL) should be at least three times lower than the reporting limit (40 CFR 136) but will vary per instrument by MDL study.
5 Total chlordane is calculated using the following compounds: alpha-chlordane, gamma-chlordane, oxychlordane, cis-nonachlor, and trans-nonachlor.
6 TMDL sediment target for this compound is currently below achievable laboratory reporting limits. Results should be reported to the EDL/MDL.
7 PCB co-elutions will vary by instrument and column, and may increase reporting limits for some congeners.
µg/g = microgram per gram
CCMRP = coordinated compliance monitoring and reporting plan
CFR = code of federal regulations
DDT = dichlorodiphenyltrichloroethane
DDD = dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethylene
EDL = estimated detection limit
MDL = method detection limit
mg/kg = milligrams per kilogram
ng/g = nanogram per gram
OC = organic carbon
PCB = polychlorinated biphenyl
QA/QC = quality assurance/quality control
RL = reporting limit
SIM = selected ion monitoring
SM = standard method
TMDL = total maximum daily load
USEPA = U.S. Environmental Protection Agency