

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

TIME SCHEDULE ORDER NO. R4-2015-YYYY

**REQUIRING TESORO REFINING & MARKETING COMPANY LLC
(TESORO LOS ANGELES REFINERY - CARSON OPERATIONS)
TO COMPLY WITH REQUIREMENTS PRESCRIBED IN
ORDER NO. R4-2015-XXXX
(NPDES PERMIT NO. CA0000680)**

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

1. The Tesoro Refining and Marketing Company LLC (hereinafter Discharger) owns and operates the Tesoro Los Angeles Refinery – Carson Operations (hereinafter Facility), a petroleum refining facility located at 1801 East Sepulveda Boulevard, Carson, California.
2. The Facility discharges wastes under waste discharge requirements (WDRs) contained in Order No. R4-2015-XXXX adopted by the Regional Board on December 10, 2015. Order No. R4-2015-XXXX serves as a National Pollutant Discharge Elimination System (NPDES) permit (NPDES No. CA0000680) and it expires on January 31, 2021.
3. The refinery processes at the Facility include crude atmospheric distillation, vacuum distillation, chemical treating superfractionation, alkylation/MTBE, catalytic cracking, hydrocracking, hydrotreating, delayed coking, catalytic reforming, hydro-desulfurization, petrochemical production, natural gas liquids production, cogeneration/steam production, gasoline blending, and sulfur recovery. Primary process units include three crude units, a fluid catalytic cracker (FCC), three reformers, two delayed cokers, a hydrocracker, a hydrotreater, an alkylation plant, an isomerization plant, a sulfur tail gas recovery unit, two hydrogen plants and a cogeneration unit.
4. Waste Stream 1 consists of low volume wastes of steam condensate, atmospheric condensate, non-contaminated service water, air conditioning condensate and fire system water. Low Volume Waste discharges are intermittent with flow rates up to 0.045 MGD. During normal operations, low volume wastes are captured in oily water drains treated at the centralized wastewater treatment system and discharged to the Los Angeles County Sanitation District (LACSD) sewer system. In the event of emergency or pump failure, low volume wastes are discharged into Dominguez Channel Estuary through Discharge Points 001, 002, 003, 004 and 005.

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5. On September 30, 2014, the Discharger submitted a letter to the Regional Water Board requesting a time schedule order (TSO) providing interim limits and a time schedule to address certain pollutants for which final effluent limitations are prescribed in Order No. R4-2015-XXXX. This TSO provides a TSO for certain pollutants as described below:
6. Order No. R4-2007-0015 included effluent limitations for low volume waste (LVW), including for aldrin, benzo(a)anthracene, chrysene, copper, and heptachlor epoxide.

Table 1. Final Effluent Limitations – Low Volume Waste Order R4-2007-0015

Constituents	Units	Effluent Limitations		
		Average Monthly	Maximum Daily	Rationale ¹
Aldrin	µg/L	0.00014	0.00028	CTR, SIP
	lbs/day ²	0.00000005	0.00000011	
Benzo(a)anthracene	µg/L	0.049	0.098	CTR, SIP
	lbs/day ²	0.000018	0.000037	
Chrysene	µg/L	0.049	0.098	CTR, SIP
	lbs/day ²	0.000018	0.000037	
Copper	µg/L	3.1	6.1	TMDL, CTR
	lbs/day ²	0.001	0.002	
Heptachlor epoxide	µg/L	0.00011	0.00022	CTR, SIP
	lbs/day ²	4.1 x 10 ⁻⁸	8.3 X 10 ⁻⁸	

Order No. R4-2007-0015 also included interim effluent limitations which were effective from April 1, 2007 through June 30, 2009 (26 months) for these pollutants. The interim limits are included in Table 2.

Table 2. Interim Effluent Limitations – Low Volume Waste Order R4-2007-0015

Constituents	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Aldrin	µg/L	--	0.0071
Benzo(a)anthracene	µg/L	--	0.39
Chrysene	µg/L	--	1.0
Heptachlor epoxide	µg/L	--	0.009

7. Low Volume wastes were discharged from the Tesoro-Carson Refinery during three discharge events in 2007 and 2008. The data for pollutants for which the Discharger requested interim limitations is included in Table 3.

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Table 3. Low Volume Waste Discharge Data

Constituents	Units	Monitoring Data		
		April 11, 2007	February 7, 2008	July 2, 2008
Aldrin	µg/L	--	<0.0014	<0.00015
Benzo(a)anthracene	µg/L	<1.9	<1.9	<1.9
Benzo(a)pyrene ¹	µg/L	<0.18	<1.9	--
Bis(2-ethylhexyl)phthalate ¹	µg/L	<3.8	<3.8	6.2
Chrysene	µg/L	<0.0056	<2.4	<2.4
Chlordane ¹	µg/L	--	--	<0.03
Copper	µg/L	6	9.5	2.2
Cyanide ¹	µg/L	27	<2.2	<2.2
4,4'-DDT ¹	µg/L	--	--	<0.0004
Dieldrin	µg/L	--	--	<0.0002
Heptachlor epoxide	µg/L	--	<0.0024	<0.0024
Nickel, Total Recoverable	µg/L	11	3.5	0.9
Pyrene ¹	µg/L	0.051	--	<3.8
Total PCBs ¹	µg/L	--	<1.9	<1.9

¹ This pollutant did not have a limitation in Order R4-2007-0015 for low volume waste.

The limit for nickel in Order R4-2007-0015 is the same as the limit in Order R4-2015-XXXX and the discharger has exceeded the monthly average limit only once during the three sampling events. Hence, this TSO does not include interim limits for nickel. The data reported for pyrene indicates the Discharger will be able to comply with the most stringent limitation for the pollutant, the monthly average limitation of 11,000 µg/L.

There are a number of pollutants with results from only one sample. There is only one sample result for 4,4'-DDT and the detection limit (0.0004 µg/L) used is below the final average monthly effluent limitation of 0.00059. Hence, there is not sufficient information to support the need for an interim limit or a TSO for 4, 4'-DDT. Thus, this TSO does not include such interim limits.

The concentrations detected and/or the detection limits for other pollutants included in the table are elevated relative to the final effluent limitations included in Order R4-2007-0015 or in R4-2015-00XX. Hence, compliance with the final effluent limitations cannot be confirmed.

- On May 5, 2011 the Regional Water Board adopted Resolution No. R11-008, that amended the Basin Plan to incorporate a Total Maximum Daily Load (TMDL) for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbors Waters (Harbor Toxics TMDL). The Harbor Toxics TMDL was approved by the State Water Resources Control Board (State Water Board) on February 7, 2012, the Office of Administrative Law (OAL) on March 21, 2012, and the U.S. Environmental Protection

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Agency (USEPA) on March 23, 2012. The Harbor Toxics TMDL contains waste load allocations (WLAs) applicable to discharges from the Facility to the Dominguez Channel Estuary. The Harbor Toxics TMDL included water column final concentration-based WLAs for chlordane, total PCBs, benzo(a)anthracene, benzo(a)pyrene, and chrysene.

As required by Title 40 Code of Federal Regulations section 122.44(d)(4)(vii)(B), Order No. R4-2015-XXXX implements and is consistent with the assumptions and requirements of WLAs established in the Harbor Toxics TMDLs. The final water quality-based effluent limitations (WQBELs) are statistically-calculated based on the WLAs for chlordane, total PCBs, benzo(a)anthracene, benzo(a)pyrene, and chrysene.

- Order No. R4-2015-XXXX prescribed effluent limitations for low volume waste (LVW) for aldrin, cyanide, chlordane, total PCBs, benzo(a)anthracene, benzo(a)pyrene, chrysene, heptachlor epoxide, dieldrin, 4,4'-DDT, pyrene, nickel, and bis(2-ethylhexyl)phthalate through Discharge Points 001, 002, 003, 004 and 005. The final effluent limitations are as follows:

Table 4. Final Effluent Limitations – Low Volume Waste

Constituents	Units	Effluent Limitations		
		Average Monthly	Maximum Daily	Rationale ¹
Aldrin	µg/L	0.00014	0.00028	E, CTR
	lbs/day ²	0.00000005	0.0000001	
Benzo(a)anthracene	µg/L	0.049	0.098	E, TMDL, CTR
	lbs/day ²	0.00002	0.00004	
Benzo(a)pyrene	µg/L	0.049	0.098	TMDL, CTR
	lbs/day ²	0.00002	0.00004	
Bis(2-ethylhexyl)phthalate	µg/L	5.9	12	CTR
	lbs/day ²	0.002	0.004	
Chlordane	µg/L	0.00059	0.0012	TMDL, CTR
	lbs/day ²	0.0000002	0.0000005	
Chrysene	µg/L	0.049	0.098	E, TMDL, CTR
	lbs/day ²	0.00002	0.00004	
Copper	µg/L	3.1	6.1	TMDL, CTR
	lbs/day ²	0.001	0.002	
Cyanide	µg/L	0.5	1.0	CTR
	lbs/day ²	0.0002	0.0004	
Dieldrin	µg/L	0.00014	0.00028	TMDL, CTR
	lbs/day ²	0.00000005	0.0000001	
4,4'-DDT	µg/L	0.00059	0.0012	TMDL, CTR
	lbs/day ²	0.0000002	0.0000005	
Heptachlor Epoxide	µg/L	0.00011	0.00022	E, CTR
	lbs/day ²	0.00000004	0.00000008	

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Constituents	Units	Effluent Limitations		
		Average Monthly	Maximum Daily	Rationale ¹
Nickel	µg/L	6.8	13.6	E, CTR
	lbs/day ²	0.0025	0.005	
Pyrene	µg/L	11,000	22,068	TMDL, CTR
	lbs/day ²	4.13	8.25	
Total PCBs	µg/L	0.00017	0.0003	TMDL, CTR
	lbs/day ¹	0.00000006	0.0000001	

¹ E = Existing; CTR=California Toxics Rule TMDL = Total Maximum Daily Loads (Based on Harbor Toxics TMDL)

² The mass-based effluent limitations are based upon a discharge of 0.045 MGD
 Mass (lbs/day) = Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor)

10. The Discharger’s September 30, 2014, letter requested a TSO to conduct a study to determine if discharges to receiving waters exceed the effluent limitations for aldrin, benzo(a)anthracene, benzo(a)pyrene, bis(2-ethylhexyl)phthalate, chlordane, chrysene, copper, cyanide, dieldrin, 4,4-DDT, heptachlor epoxide, nickel, pyrene, and total PCBs. As stated in Finding 6 above; interim limits for 4,4-DDT, nickel, and pyrene are not warranted.

The Discharger also requested that an interim limit for copper and other pollutants addressed in the Harbor Toxics TMDL be included in the permit. The effluent limitation in Order R4-2007-0015 for copper is more stringent than the effluent limit included in Order R4-2015-XXXX (see Tables 1 and 4 above). Even though the limit in Order R4-2015-XXXX is less stringent with a daily maximum of 6.1 µg/L and a monthly average of 3.1 µg/L; the data reported is elevated relative to the limits (see Table 3 above) and the Discharger will not be able to immediately comply. Therefore, interim limitations for copper are included in this TSO.

The letter summarized the Discharger’s actions to achieve full compliance with the effluent limitations for these pollutants in Order No. R4-2015-XXXX. The actions include completion of a study to determine the required and available retention capacity of the Refinery, a feasibility study to determine necessary storm water storage capacity to retain rainfall volumes, and a study to evaluate treatment options to include recycle and reuse of treated wastewater and storm water. Accordingly, the Regional Water Board finds that Tesoro is making diligent efforts to bring its waste discharge into compliance with the effluent limitations.

11. Section 13300 of the California Water Code states, in part, that:

“Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal

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facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements.”

12. Water Code section 13385, subdivisions (h) and (i), require the Regional Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. Section 13385(j)(3) exempts violations of an effluent limitation from mandatory minimum penalties "where the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300, *if all of the [specified] requirements are met.*" (emphasis added).
13. As described in Finding 9, new or modified control measures may be necessary in order for the Discharger to comply with the new effluent limitations for benzo(a)pyrene, bis(2-ethylhexyl)phthalate, chlordane, copper, cyanide, and total PCBs prescribed in Order No. R4-2015-XXXX. The limited data set of three data points collected during discharges in 2007 and 2008 indicates that the Discharger may not be able to immediately comply with the final effluent limitations for aldrin, benzo(a)anthracene, chrysene, dieldrin, and heptachlor epoxide, as well. These new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.
14. This TSO establishes interim effluent limitations for aldrin, copper, cyanide, chlordane, total PCBs, benzo(a)anthracene, benzo(a)pyrene, chrysene, and heptachlor epoxide and requires the Discharger to undertake specific actions in order to prevent or correct the discharge of waste that exceeds or threatens to exceed the final effluent limitations for these pollutants prescribed in Order No. R4-2015-XXXX. The TSO establishes a time schedule for bringing the waste discharge into compliance with the final effluent limitations in as short amount of time as possible, taking into account the technological, operation, and economic factors that affect the design, development, and implementation of the control measures that are necessary for compliance.
15. The time schedule for completion of the action necessary to bring the waste discharge into compliance exceeds one year from the effective date of this TSO. Accordingly, this TSO includes interim requirements and the dates for their achievement. The interim requirements include interim effluent limitations and actions and milestones leading to compliance with the final effluent limitations set by Order No. R4-2015-XXXX.

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16. Full compliance with the requirements of this TSO exempts the Discharger from mandatory minimum penalties only for violations of the final effluent limitations for aldrin, cyanide, chlordane, total PCBs, benzo(a)anthracene, benzo(a)pyrene, chrysene, and heptachlor epoxide in Order No. R4-2015-XXXX, pursuant to Water Code section 13385(j)(3).
17. Water Code section 13385(j)(3) requires the Discharger to prepare and implement a pollution prevention plan pursuant to Water Code section 13263.3. The Discharger must prepare and implement a pollution prevention plan for aldrin, cyanide, total PCBs, benzo(a)anthracene, benzo(a)pyrene, chrysene, and heptachlor epoxide pursuant to Water Code section 13263.3.
18. This TSO allows the Discharger necessary time to evaluate and, if needed undertake actions to reduce the amount of aldrin, cyanide, chlordane, copper, total PCBs, benzo(a)anthracene, benzo(a)pyrene, chrysene, and heptachlor epoxide in its waste discharge and comply with applicable effluent limitations. This Order does not modify the final effluent limitations for these pollutants set by Order No. R4-2015-XXXX. The interim effluent limitations included in this TSO will advance completion of necessary upgrades to control measures if necessary to reduce the pollutant concentrations in the waste discharge in a timely manner, and are therefore in the public interest.
19. The Regional Water Board has notified the Discharger, interested agencies, and persons of its intent to issue this TSO concerning compliance with waste discharge requirements. The Regional Water Board accepted written comments, and heard and considered all comments pertinent to this matter in a public hearing.
20. Issuance of this TSO is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with section 15321(a), Title 14 of the California Code of Regulations (exemption from CEQA for enforcement actions) and section 15301, Title 14 of the California Code of Regulations (exemption from CEQA for existing facilities).
21. Any person aggrieved by this action of the Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must *receive* the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

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IT IS HEREBY ORDERED that, pursuant to California Water Code section 13300, Tesoro Refining & Marketing Company LLC, as the owner and operator of the Tesoro Los Angeles Refinery – Carson Operations, shall comply with the requirements listed below to ensure compliance with the final effluent limitations for low volume waste for aldrin, copper, cyanide, chlordane, total PCBs, benzo(a)anthracene, benzo(a)pyrene, chrysene, and heptachlor epoxide through Discharge Points 001, 002, 003, 004 and 005 contained in Order No. R4-2015-XXXX:

1. Comply immediately with the following interim effluent limitations:

Table 5. Interim Effluent Limitations for Low Volume Wastes at Discharge Outfalls 001, 002, 003, 004 and 005

Constituents	Units	Interim Effluent Limitations ¹	
		Average Monthly	Maximum Daily
Aldrin	µg/L	0.0014	0.0014
	lbs/day ²	5E-07	5E-07
Benzo(a)anthracene	µg/L	0.39	0.39
	lbs/day ²	0.00016	0.00016
Benzo(a)pyrene	µg/L	1.9	1.9
	lbs/day ²	0.00077	0.00077
Bis(2-ethylhexyl)phtahlate	µg/L	6.2	12
	lbs/day ²	0.002	0.004
Chlordane	µg/L	0.03	0.03
	lbs/day ²	0.000001	0.000001
Copper	µg/L	9.5	9.5
	lbs/day ²	0.003	0.003
Chrysene	µg/L	1.0	1.0
	lbs/day ²	0.0004	0.0004
Cyanide	µg/L	2.2	2.2
	lbs/day ²	0.0009	0.0009
Dieldrin	µg/L	0.0002	0.00028
	lbs/day ²	0.0000007	0.0000001
Heptachlor Epoxide	µg/L	0.0024	0.0024
	lbs/day ²	8.7E-07	8.7E-07
Total PCBs	µg/L	1.9	1.9
	lbs/day ²	0.00067	0.00067

¹ The interim effluent limitations were derived from the Facility's monitoring data collected from the three minor low volume waste discharges in 2007 and 2008 and are based on MEC and laboratory's method detection limits (MDL) and interim limits that were included in Order No. R4-2007-0015.

² The mass limitations in lbs/day were calculated using the concentration limits and the maximum flow rate of 0.045 million gallons per day (mgd);
 Mass (lbs/day) = Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor)

The foregoing interim effluent limitations for aldrin, benzo(a)anthracene, benzo(a)pyrene, chlordane, copper, cyanide, dieldrin, heptachlor epoxide and total PCBs are in effect from February 1, 2016, through January 31, 2020. During this time,

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the Discharger shall investigate and implement any required upgrades to control measures to ensure compliance with the final effluent limitations for the pollutants included in Table 2 above that are contained in Order No. R4-2015-XXXX.

- The Discharger shall comply with the tasks and schedule in Table 6 below to achieve the final effluent limits for pollutants listed in Table 5 above. The compliance schedule is based on the Discharger's estimated time schedule for completion as proposed in the request dated September 30, 2014, with modifications from the Regional Board. The compliance schedule is as follows:

Table 6. Compliance Schedule

Task No.	Description	Start Date	Completion Date	Report date
1	Conduct a study to determine the required and available retention capacity of the Refinery	February 1, 2016	January 31, 2017	February 27, 2017
2	Conduct feasibility study for providing necessary storm water storage capacity to retain rainfall volumes determined in Task 1, above	February 1, 2017	January 31, 2018	February 27, 2018
3	If retention of storm water on-site is not feasible as determined in Task 2, above, evaluate treatment options to include recycle and reuse of treated wastewater and storm water.	February 1, 2018	January 31, 2019	February 27, 2019
4	Prepare scope and schedule to implement required actions to achieve compliance.	February 1, 2018	January 31, 2020	February 27, 2020
5	Achieve compliance.	February 1, 2016	January 31, 2020	February 27, 2020

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- Achieve full compliance with the final effluent limitations for aldrin, benzo(a)anthracene, benzo(a)pyrene, bis(2-ethylhexyl)phthalate, chlordane, copper,

chrysene, cyanide, dieldrin, heptachlor epoxide, and total PCBs, in Order No. R4-2015-XXXX, no later than January 31, 2020.

4. Submit for approval to the Executive Officer as soon as possible, but no later than June 15, 2017, a Pollution Prevention Plan (PPP) workplan, with the time schedule for implementation, pursuant to California Water Code section 13263.3.
5. Submit semiannual progress reports of efforts towards compliance with the final effluent limitations for the pollutants listed in Table 5 above. The reports shall summarize the progress to date, activities conducted during the reporting period, and the activities planned for the upcoming reporting period. Each report shall be submitted to this Regional Water Board by February 27th and August 27th for the second half of the previous reporting year and the first half of the reporting year, respectively, and include milestones completed and any new pertinent updates. The first semiannual progress report is due on August 27, 2017.
6. Submit a final report on the results of the evaluation of the selected actions/measures by February 27, 2019. The report shall include: a) results of the study proposed by Discharger; b) a description of the actions/measures selected; c) the monitoring data collected; and d) an evaluation of the effectiveness of the selected actions/measures.
7. All technical reports required under this TSO are required pursuant to California Water Code sections 13267 and 13383. The Regional Water Board needs the required information in order to determine compliance with this TSO. The burdens, including costs, of these reports bear a reasonable relationship to the needs for the reports and the benefits to be obtained from the reports.
8. The Regional Board, under the authority given by Water Code section 13267(b)(1), requires a Discharger to include a perjury statement in all reports submitted under this TSO. The perjury statement shall be signed by a senior authorized representative (not by a consultant). The perjury statement shall be in the following format:

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

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9. If the Discharger fails to comply with any provision of this TSO, the Regional Water Board may take any further action authorized by law. The Executive Officer, or his/her delegate, is authorized to take appropriate administrative enforcement action pursuant, but not limited to, Water Code sections 13301, 13350 and/or 13385. The Regional Board may also refer violations to the Attorney General for judicial enforcement, including injunction and civil monetary remedies
10. All other provisions of Order No. R4-2015-XXXX, that do not conflict with this TSO, are in full force and effect.
11. This Time Schedule Order expires on January 31, 2020.

I, Samuel Unger, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on December 10, 2015.

Samuel Unger, P.E.
Executive Officer

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