



EDMUND G. BROWN JR.  
GOVERNOR

MATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

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## Los Angeles Regional Water Quality Control Board

December 14, 2016

Ms. Kathryn Gleeson  
Manager, Environmental Services  
Paramount Petroleum Corporation  
14700 Downey Avenue  
Paramount, CA 90723

Certified Mail  
Return Receipt Requested  
Claim No. 7000 0600 0029 1196 7482

Dear Ms. Gleeson:

**TRANSMITTAL OF THE WASTE DISCHARGE REQUIREMENTS AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT – PARAMOUNT PETROLEUM CORPORATION, PARAMOUNT PETROLEUM REFINERY, PARAMOUNT, CALIFORNIA (NPDES NO. CA0056065, CI NO. 6038)**

Our letter dated October 14, 2016, transmitted the revised tentative Order for renewal of your permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES) Program.

Pursuant to Division 7 of the California Water Code, this Regional Water Board at a public hearing held on December 8, 2016, reviewed the revised tentative requirements, considered all factors in the case, and adopted Order No. R4-2016-0359. Order R4-2016-0359 serves as an NPDES permit, and it expires on January 31, 2022. Section 13376 of the California Water Code requires that an application/Report of Waste Discharge for a new permit must be filed at least 180 days before the expiration date.

You are required to implement the Monitoring and Reporting Program (MRP) on the effective date (February 1, 2017) of Order No. R4-2016-0359. Your first monitoring report for the period of February 1, 2017, through March 31, 2017, is due by May 1, 2017.

Please continue to electronically submit Self-Monitoring Reports (SMRs) using the State Water Resources Control Board's California Integrated Water Quality System (CIWQS) Program web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). The CIWQS web site will provide additional information for SMR submittal in the event there is a planned service interruption for electronic submittal. Also, please do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

Please convert all of the regulatory documents, submissions and correspondence that you would normally submit to us as hard copies to a searchable Portable Document Format (PDF). Please reference facility name, NPDES permit number and Compliance File CI-6038 on the documents. Documents that are less than 10 megabytes (MB) should be emailed to [losangeles@waterboards.ca.gov](mailto:losangeles@waterboards.ca.gov) with a copy to [namiraj.jain@waterboards.ca.gov](mailto:namiraj.jain@waterboards.ca.gov). Documents that are 10 MB or larger should be transferred to a disk and mailed to the address listed above.

Ms. Kathryn Gleeson  
Paramount Petroleum Corporation  
Paramount Petroleum Refinery

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December 14, 2016

If you need additional information regarding electronic submittal of documents please visit the Regional Water Board's website listed above and navigate to Paperless Office.

If you have any questions, please contact Namiraj Jain at (213) 620-6003.

Sincerely,



for Cassandra D. Owens, Chief  
Industrial Permitting Unit (NPDES)

Enclosures

cc: Ms. Robyn Stuber, Environmental Protection Agency, Region 9, Permits Branch (WTR-5)  
NPDES Wastewater Unit, State Water Resources Control Board, Division of Water Quality  
Ms. Becky Mitschele, Environmental Protection Agency, Region 9  
Mr. Kenneth Wong, U.S. Army Corps of Engineers  
Mr. Bryant Chesney, NOAA, National Marine Fisheries Service  
Mr. Jeff Phillips, Department of Interior, U.S. Fish and Wildlife Service  
Mr. William Paznokas, Department of Fish and Game, Region 5  
Mr. Kurt Souza, State Water Resources Control Board, Drinking Water Division  
Ms. Teresa Henry, California Coastal Commission, South Coast Region  
Mr. Theodore Johnson, Water Replenishment District of Southern California  
Mr. Tommy Smith, Los Angeles County, Department of Public Works  
Mr. Angelo Bellomo, Los Angeles County, Department of Public Health  
Mr. Steven Johnson, Heal the Bay  
Ms. Rita Kampalath, Heal the Bay  
Mr. Bruce Reznik, Los Angeles Waterkeeper  
Ms. Anna Kheyfets, Natural Resources Defense Council  
Ms. Becky Hayat, Natural Resources Defense Council  
Mr. James Ashby, PG Environmental  
Ms. Sarah Torres, PG Environmental

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

320 W. 4th Street, Suite 200, Los Angeles, California 90013  
Phone (213) 576-6600 • Fax (213) 576-6640  
<http://www.waterboards.ca.gov/losangeles>

**ORDER R4-2016-0359  
NPDES NO. CA0056065**

**WASTE DISCHARGE REQUIREMENTS  
FOR THE PARAMOUNT PETROLEUM CORPORATION  
PARAMOUNT PETROLEUM REFINERY**

The following Discharger is subject to waste discharge requirements (WDRs) set forth in this Order:

**Table 1. Discharger Information**

Discharger	Paramount Petroleum Corporation
Name of Facility	Paramount Petroleum Refinery
Facility Address	14700 Downey Avenue
	Paramount, California 90723
	Los Angeles County

**Table 2. Discharge Location**

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated Storm Water	33.899 N	-118.147 W	Storm Drain to Los Cerritos Channel

**Table 3. Administrative Information**

This Order was adopted on:	December 8, 2016
This Order shall become effective on:	February 1, 2017
This Order shall expire on:	January 31, 2022
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDR's in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	180 days prior to the Order expiration date
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	Minor

I, Samuel Unger, 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, Los Angeles Region, on **December 8, 2016**.



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Samuel Unger, P.E., Executive Officer

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## I. FACILITY INFORMATION

Information describing the Paramount Petroleum Refinery (Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

## II. FINDINGS

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

- A. Legal Authorities.** This Order serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (CWC) (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an National Pollutant Discharge Elimination System (NPDES) permit for point source discharges from this facility to surface waters.
- B. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E and G through J are also incorporated into this Order.
- C. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections IV.B, IV.C, and V.B are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.
- D. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.
- E. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED that Order R4-2011-0050 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger is authorized to discharge from the identified facility and outfalls into waters of the United States and shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for past violations of the previous Order.

## III. DISCHARGE PROHIBITIONS

- A.** Wastes discharged at Discharge Point 001 shall be limited to a maximum of 0.144 MGD of treated storm water runoff from the Facility, and shall occur only because of storm events. The discharge of fire test water or wastes from accidental spills or other sources is prohibited. Fire test water shall be managed such that there is no fire test water present on the ground during storm events that could potentially commingle with storm water discharge.

- B. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, the Los Cerritos Channel, or other waters of the State, are prohibited.
- C. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or a nuisance as defined by Section 13050 of the Water Code.
- D. Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.
- E. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board (State Water Board) as required by the Federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Federal CWA, and amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.
- F. Discharge of oil or any residuary product of petroleum to waters of the State, except in accordance with waste discharge requirements or other provisions of Division 7 of the CWC, is prohibited.
- G. The discharge of any radiological, chemical, or biological warfare agent into the waters of the state is prohibited under CWC section 13375.
- H. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.
- I. The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited.

**IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

**A. Effluent Limitations**

**1. Final Effluent Limitations – Storm Water Through Discharge Point 001**

- a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Locations EFF-001 as described in the Monitoring and Reporting Program, Attachment E:

**Table 4. Effluent Limitations from Petroleum Refinery Operations at Discharge Point 001**

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
<b>Conventional Pollutants</b>					
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	26 <sup>2</sup>	30	--	--
	lbs/day <sup>1,2</sup>	32 <sup>2</sup>	36 <sup>1</sup>	--	--
Oil and Grease	mg/L	8.0 <sup>2</sup>	15	--	--
	lbs/day <sup>1,2</sup>	10 <sup>2</sup>	18 <sup>1</sup>	--	--
pH	standard units	--	--	6.5	8.5
Total Suspended Solids (TSS)	mg/L <sup>2</sup>	22	34	--	--
	lbs/day <sup>2</sup>	26	40	--	--
<b>Non-Conventional Pollutants</b>					
Chronic Toxicity	Pass or Fail, %Effect (TST)	--	Pass or % Effect <50 <sup>3</sup>	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Chemical Oxygen Demand (COD)	mg/L <sup>2</sup>	180	360	--	--
	lbs/day <sup>2</sup>	216	432	--	--
Phenolic Compounds <sup>4</sup>	µg/L	--	1	--	--
	lbs/day <sup>1</sup>	--	0.001	--	--
Temperature	°F	--	--	--	86
Total Organic Carbon (TOC)	mg/L	--	110	--	--
	lbs/day <sup>1</sup>	--	132	--	--
Total Petroleum Hydrocarbons (TPH) <sup>7</sup>	µg/L	--	100	--	--
	lbs/day <sup>1</sup>	--	0.12	--	--
<b>Priority Pollutants</b>					
Chromium, Total Recoverable	µg/L <sup>2</sup>	216	600	--	--
	lbs/day <sup>2</sup>	0.26	0.72	--	--
Chromium (VI)	µg/L	--	15	--	--
	lbs/day <sup>1</sup>	--	0.02	--	--
Copper, Total Recoverable (Dry Weather) <sup>5</sup>	µg/L	--	31.4	--	--
	lbs/day <sup>1</sup>	--	0.038	--	--
Copper, Total Recoverable (Wet Weather) <sup>6</sup>	µg/L	--	9.8	--	--
	lbs/day <sup>1</sup>	--	0.012	--	--
Lead, Total Recoverable (Wet Weather) <sup>6</sup>	µg/L	--	56	--	--
	lbs/day <sup>1</sup>	--	0.067	--	--
Mercury, Total Recoverable	µg/L	--	0.1	--	--
	lbs/day <sup>1</sup>	--	0.0001	--	--
Zinc, Total Recoverable (Dry Weather) <sup>5</sup>	µg/L	--	188	--	--
	lbs/day <sup>1</sup>	--	0.23	--	--
Zinc, Total Recoverable (Wet Weather) <sup>6</sup>	µg/L	--	96	--	--
	lbs/day <sup>1</sup>	--	0.12	--	--

**Table 5. Effluent Limitations from Biofuel Refinery Operations at Discharge Point 001**

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
<b>Conventional Pollutants</b>					
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	---	30	--	--
	lbs/day <sup>1</sup>	---	36 <sup>1</sup>	--	--
Oil and Grease	mg/L	---	15	--	--
	lbs/day <sup>1</sup>	---	18	--	--
pH	standard units	--	--	6.5	8.5
Total Suspended Solids (TSS)	mg/L <sup>2</sup>	---	75	--	--
	lbs/day <sup>2</sup>	---	90	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
<b>Non-Conventional Pollutants</b>					
Chronic Toxicity	Pass or Fail, %Effect (TST)		Pass or % Effect <50 <sup>3</sup>	--	--
Temperature	°F	--	--	--	86
Total Petroleum Hydrocarbons (TPH) <sup>7</sup>	µg/L	--	100	--	--
	lbs/day <sup>1</sup>	--	0.12	--	--
<b>Priority Pollutants</b>					
Copper, Total Recoverable (Dry Weather) <sup>5</sup>	µg/L	--	31.4	--	--
	lbs/day <sup>1</sup>	--	0.038	--	--
Copper, Total Recoverable (Wet Weather) <sup>6</sup>	µg/L	--	9.8	--	--
	lbs/day <sup>1</sup>	--	0.012	--	--
Lead, Total Recoverable (Wet Weather) <sup>6</sup>	µg/L	--	56	--	--
	lbs/day <sup>1</sup>	--	0.067	--	--
Mercury, Total Recoverable	µg/L	--	0.1	--	--
	lbs/day <sup>1</sup>	--	0.0001	--	--
Zinc, Total Recoverable (Dry Weather) <sup>5</sup>	µg/L	--	188	--	--
	lbs/day <sup>1</sup>	--	0.23	--	--
Zinc, Total Recoverable (Wet Weather) <sup>6</sup>	µg/L	--	96	--	--
	lbs/day <sup>1</sup>	--	0.12	--	--

- 1 Mass loading limitations are based on a maximum design flow of 0.144 MGD and are calculated as follows:  
Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.
- 2 Mass loading limitations are calculated based on mass loading factors contained in 40 CFR section 419 and a maximum design flow of 0.144 MGD. Equivalent concentration-based limitations are calculated based on the mass loading limitations and a maximum design flow of 0.144 MGD, as follows: Mass (lbs/day) / [Flow (MGD) x 8.34 (conversion factor)] = mg/L.
- 3 The Maximum Daily Effluent Limitation (MDEL) is exceeded when a toxicity test results in a "fail," and the percent effect is greater than or equal to 50.
- 4 Phenolic compounds include the sum of the following individual chlorinated and non-chlorinated phenolic compounds: 2-chlorophenol; 2-nitrophenol; phenol; 2,4-dimethylphenol; 2,4-dichlorophenol; 2,4,6-trichlorophenol; 4-chloro-3-methylphenol; 2,4-dinitrophenol; 2-methyl-4,6-dinitrophenol; pentachlorophenol; and 4-nitrophenol.
- 5 Dry weather is assumed for any discharge that occurs when the flow is less than 23 cubic feet per second as measured at the Stearns Street flow gauge in Los Cerritos Channel. Flow information is available by contacting [pkinner@kinneticlabs.com](mailto:pkinner@kinneticlabs.com) or at (562)595-8700. If the aforementioned contact indicates flow was not measured due to low flow conditions, then dry weather is assumed for compliance with effluent limitations.
- 6 Wet weather is assumed for any discharge that occurs when the flow is equal to or greater than 23 cubic feet per second as measured at the Stearns Street flow gauge in Los Cerritos Channel. Flow information is available by contacting [pkinner@kinneticlabs.com](mailto:pkinner@kinneticlabs.com) or at (562)595-8700. If the aforementioned contact indicates flow was not measured due to low flow conditions, then dry weather is assumed for compliance with effluent limitations.
- 7 TPH equals the sum of TPH gasoline (C<sup>4</sup>-C<sup>12</sup>), TPH diesel (C<sup>13</sup>-C<sup>12</sup>), and TPH oil (C<sup>23+</sup>)



**B. Land Discharge Specifications – Not Applicable**

**C. Recycling Specifications – Not Applicable**

**V. RECEIVING WATER LIMITATIONS**

**A. Surface Water Limitations**

The discharge shall not cause the following in the Los Cerritos Channel:

1. The pH of Los Cerritos Channel shall not be depressed below 6.5 or raised above 8.5 as a result of the discharge. Ambient pH levels shall not be changed more than 0.5 units from natural conditions as a result of waste discharge. Natural conditions shall be determined on a case-by-case basis.
2. Surface water temperature to rise greater than 5° F above the natural temperature of the receiving waters at any time or place. At no time shall the temperature be raised above 80° F as a result of waste discharged.
3. Water Contact Standards

State/Regional Water Board Water Contact Standards

In fresh water designated for Water Contact Recreation (REC-1), the waste discharged shall not cause the following bacterial standards to be exceeded in the receiving water:

- i. Geometric Mean Limits
  - (a) E. coli density shall not exceed 126/100 ml.
- ii. Single Sample Maximum (SSM)
  - (a) E. coli density shall not exceed 235/100 ml.

The geometric mean values should be calculated based on a statistically sufficient number of samples (generally not less than 5 samples equally spaced over a 30-day period).

If any of a single sample limits are exceeded, the Regional Board may require repeat sampling on a daily basis until the sample falls below the single sample limit in order to determine the persistence of the exceedance.

When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during the 30-day period shall be used to calculate the geometric mean.

4. The concentration of dissolved oxygen to fall below 5.0 mg/L at any time, and the median dissolved oxygen concentration for any three consecutive months to be less than 80 percent of the dissolved oxygen content at saturation.
5. Exceed total ammonia (as N) concentrations specified in the 1994 Basin Plan and its amendments. The Regional Water Board revised the water quality objectives for ammonia to be consistent with the *“1999 Update of Ambient Water Quality Criteria for Ammonia”* through the adoption of Resolution No. 2002-011 on April 25, 2002. This amendment was approved by the State Water Board, OAL and U.S. EPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively. The amendment became effective on July 15, 2003. On December 1, 2005, Resolution No. 2005-014, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Revise the Early Life Stage Implementation Provision of the Freshwater Ammonia Objectives for Inland Surface*

*Waters (including enclosed bays, estuaries and wetlands) for Protection of Aquatic Life*, was adopted by the Regional Water Board. Resolution No. 2005-014 was approved by the State Water Board, OAL, and U.S. EPA on July 19, 2006, August 31, 2006, and April 5, 2007, respectively; it became effective on April 5, 2007. On June 7, 2007, the Regional Water Board adopted Resolution No. 2007-005 to incorporate site-specific 30-day average objectives for ammonia along with corresponding site-specific early life stage implementation provisions for select water body reaches and tributaries in the Santa Clara, Los Angeles, and San Gabriel River watersheds. The State Water Board, OAL, and U.S. EPA approved this Basin Plan amendment on January 15, 2008, May 12, 2008, and March 30, 2009, respectively. The amendment became effective on April 23, 2009.

6. The presence of visible, floating, suspended or deposited macroscopic particulate matter or foam.
7. Where natural turbidity is between 0 to 50 NTU, increases in turbidity shall not exceed 20%. Where natural turbidity is greater than 50 NTU, increases in turbidity shall not exceed 10%.
8. Oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the receiving water or on objects in the water.
9. Suspended or settleable materials, chemical substances or pesticides in amounts that cause nuisance or adversely affect any designated beneficial use.
10. Toxic or other deleterious substances in concentrations or quantities which cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
11. Accumulation of bottom deposits or aquatic growths.
12. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.
13. The presence of substances that result in increases of BOD that adversely affect beneficial uses.
14. Taste or odor-producing substances in concentrations that alter the natural taste, odor, and/or color of fish, shellfish, or other edible aquatic resources; cause nuisance; or adversely affect beneficial uses.
15. Alteration of turbidity, or apparent color beyond present natural background levels.
16. Damage, discolor, or formation of sludge deposits on flood control structures or facilities, or overloading of the design capacity.
17. Degradation of surface water communities and populations including vertebrate, invertebrate, and plant species.
18. Problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.
19. Nuisance, or adversely affect beneficial uses of the receiving water.
20. Violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or State Water Board. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of CWA, or amendments thereto, the Regional Water Board will revise or modify this Order in accordance with such standards.

**B. Groundwater Limitations – Not Applicable**

**VI. PROVISIONS**

**A. Standard Provisions**

1. The Discharger shall comply with all Standard Provisions included in Attachment D.
2. The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:
  - a. This Order may be modified, revoked, reissued, or terminated in accordance with the provisions of 40 C.F.R., sections 122.44, 122.62, 122.63, 122.64, 125.62 and 125.64. Causes for taking such actions include, but are not limited to: failure to comply with any condition of this Order; endangerment to human health or the environment resulting from the permitted activity; or acquisition of newly-obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the Discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.
  - b. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management programs developed to comply with NPDES permits issued by the Regional Water Board to local agencies.
  - c. Discharge of wastes to any point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.
  - d. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to sections 301, 302, 303(d), 304, 306, 307, 316, 318, 405, and 423 of the Federal CWA and amendments thereto.
  - e. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal facility, and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.
  - f. Oil or oily material, chemicals, refuse, or other wastes that constitute a condition of pollution or nuisance shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.
  - g. A copy of these waste discharge specifications shall be maintained at the discharge facility so as to be available at all times to operating personnel.
  - h. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
    - i. Violation of any term or condition contained in this Order;
    - ii. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;

- iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- i. If there is any storage of hazardous or toxic materials or hydrocarbons at this facility and if the facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.
- j. The Discharger shall notify the Regional Water Board not later than 120 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing or processing facility by more than ten percent. Such notification shall include estimates of proposed production rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge and the appropriate filing fee.
- k. The Discharger shall file with the Regional Water Board a report of waste discharge at least 140 days before making any material change or proposed change in the character, location or volume of the discharge.
- l. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.
- m. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify this Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Regional Water Board.
- n. The Water Code provides that any person who violates a waste discharge requirement or a provision of the Water Code is subject to civil penalties of up to \$5,000 per day, \$10,000 per day, or \$25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to \$10 per gallon per day or \$25 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.
- o. Violation of any of the provisions of the NPDES program or of any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.
- p. The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States, is prohibited unless specifically authorized elsewhere in this permit or another NPDES permit. This requirement is not applicable to products used for lawn and agricultural purposes.
- q. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.
- r. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to the planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:
  - i. Name and general composition of the chemical,

- ii. Frequency of use,
  - iii. Quantities to be used,
  - iv. Proposed discharge concentrations, and
  - v. U.S. EPA registration number, if applicable.
- s. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
- t. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, average monthly effluent limitation, maximum daily effluent limitation, instantaneous minimum effluent limitation, instantaneous maximum effluent limitation, or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board by telephone (213) 576-6600 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.
- u. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Wat. Code § 1211.)

**B. Monitoring and Reporting Program (MRP) Requirements**

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E.

**C. Special Provisions**

**1. Reopener Provisions**

- a. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal CWA, and amendments thereto, the Regional Water Board may revise and modify this Order in accordance with such more stringent standards.
- b. This Order may be reopened to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as part of this Order and based on the results of the RPA.
- c. This Order may be reopened and modified, to incorporate in accordance with the provisions set forth in 40 C.F.R., parts 122 and 124, to include requirements for the implementation of the watershed management approach or to include new MLs.
- d. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments, such as an update of an objective or the adoption of a TMDL for the Los Cerritos Channel.

- e. This Order may be reopened upon submission by the Discharger of adequate information, as determined by the Regional Water Board, to provide for dilution credits or a mixing zone, as may be appropriate.
- f. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.
- g. This Order may also be reopened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 C.F.R. sections 122.44, 122.62, to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order, and endangerment to human health or the environment resulting from the permitted activity.

**2. Special Studies, Technical Reports and Additional Monitoring Requirements**

- a. **Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan.** The Discharger shall submit to the Regional Water Board an Initial Investigation TRE workplan (1-2 pages) **within 90 days** of the effective date of this permit. This plan shall describe the steps the permittee intends to follow in the event that toxicity is detected. See section V of the Monitoring and Reporting Program (Attachment E) for an overview of TRE requirements.

**3. Best Management Practices and Storm Water Pollution Prevention Provisions**

- a. **Storm Water Pollution Prevention, Best Management Practices, and Spill Contingency Plans.**

The Discharger shall submit, within 90 days of the effective date of this Order:

- i. An updated **Storm Water Pollution Prevention Plan (SWPPP)** that describes site-specific management practices for minimizing contamination of storm water runoff and for preventing contaminated storm water runoff and trash from being discharged directly to waters of the State. The SWPPP shall cover all areas of the Facility and shall include an updated drainage map for the Facility. The Discharger shall identify on a map of appropriate scale the areas that contribute runoff to the permitted discharge point; describe the activities in each area and the potential for contamination of storm water runoff and the discharge of trash or hazardous waste/material; and address the feasibility of containment and/or treatment of storm water. In addition, the SWPPP shall address and include best management practices procedures that the Discharger will implement to prohibit the discharge of trash from the Facility through Discharge Point 001. The SWPPP shall be developed in accordance with the requirements in Attachment G.
- ii. An updated **Best Management Practices Plan (BMPP)** that will be implemented to reduce the discharge of pollutants to the receiving water. The BMPP shall include site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material and trash from being discharged to waters of the State. Further, the Discharger shall ensure that the storm water discharges from the Facility would neither cause nor contribute to the nuisance in the receiving water, and that unauthorized discharges (i.e.

spills) to the receiving water have been effectively prohibited. In particular, a risk assessment of each area identified by the Discharger shall be performed to determine the potential for hazardous or toxic waste/material and trash discharge to surface waters. The BMPP can be included and submitted with the SWPPP.

- iii. A **Spill Control Plan (SCP)**, that describes the preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events.

Each plan shall cover all areas of the Facility and shall include an updated drainage map for the Facility. The Discharger shall identify on a map of appropriate scale the areas that contribute runoff to the permitted discharge point (e.g., petroleum storage tanks); describe the activities in each area and the potential for contamination of storm water runoff and the discharge of hazardous waste/material; and address the feasibility of containment and/or treatment of storm water.

The Discharger shall implement the SWPPP, BMPP, and SCP (or SPCC) within 10 days of the approval by the Executive Officer or no later than 90 days after submission to the Regional Water Board, whichever comes first. The Discharger shall continue to implement any existing and previously approved SWPPP, BMPS, or SCP until an updated plan is approved by the Executive Officer or until the stipulated 90-day period after submittal has occurred. The plans shall be reviewed annually and at the same time. Updated information shall be submitted to the Regional Water Board within 30 days of revisions.

#### **4. Construction, Operation and Maintenance Specifications**

- a. The Discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this order

#### **5. Other Special Provisions**

- a. The Discharger shall notify the Regional Water Board at least 90 days before resuming petroleum refining.

#### **6. Compliance Schedules – Not Applicable**

### **VII. COMPLIANCE DETERMINATION**

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below:

#### **A. Single Constituent Effluent Limitation.**

If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (see Reporting Requirement I.G. of the MRP), then the Discharger is out of compliance.

#### **B. Effluent Limitations Expressed as a Sum of Several Constituents.**

If the sum of the individual pollutant concentrations is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, consider constituents reported as ND or DNQ to have concentrations equal to zero, provided that the applicable ML is used.

**C. Effluent Limitations Expressed as a Median.**

In determining compliance with a median limitation, the analytical results in a set of data will be arranged in order of magnitude (either increasing or decreasing order); and

1. If the number of measurements (n) is odd, then the median will be calculated as  $= X_{(n+1)/2}$ , or
2. If the number of measurements (n) is even, then the median will be calculated as  $= [X_{n/2} + X_{(n/2)+1}]/2$ , i.e. the midpoint between the  $n/2$  and  $n/2+1$  data points.

**D. Multiple Sample Data.**

When determining compliance with an AMEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

**E. Average Monthly Effluent Limitation (AMEL).**

If the average (or when applicable, the median determined by subsection 2 above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation; though the Discharger may be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month with respect to the AMEL.

In determining compliance with the AMEL, the following provisions shall also apply to all constituents:

1. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for that constituent, the Discharger has demonstrated compliance with the AMEL for each day of that month for that parameter;
2. If the analytical result of any single sample monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any constituent, the Discharger may collect up to four additional samples within the same calendar month. All analytical results shall be reported in the monitoring report for that month. The concentration of pollutant (an arithmetic mean or median) in these samples estimated from the "Multiple Sample Data Reduction" section above, will be used for compliance determination.



In the event of noncompliance with an AMEL, the sampling frequency for that parameter shall be increased to weekly and shall continue at this level until compliance with the AMEL has been demonstrated.

When all sample results are greater than or equal to the reported Minimum Level (see Reporting Requirement I.G. of the MRP), the numerical average of the analytical results of these five samples will be used for compliance determination.

When one or more sample results are reported as "Not-Detected (ND)" or "Detected, but Not Quantified (DNQ)" (see Reporting Requirement I.G. of the MRP), the median value of these four samples shall be used for compliance determination. If one or both of the middle values is NO or DNQ, the median shall be the lower of the two middle values.

3. In the event of noncompliance with an AMEL, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the AMEL has been demonstrated.
4. If only one sample was obtained for the month or more than a monthly period and the result exceeds the AMEL; then the Discharger is in violation of the AMEL.

**F. Maximum Daily Effluent Limitations (MDEL).**

If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

**G. Instantaneous Minimum Effluent Limitation.**

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

**H. Instantaneous Maximum Effluent Limitation.**

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

**I. Median Monthly Effluent Limitation (MMEL)**

If the median of daily discharges over a calendar month exceeds the MMEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of noncompliance in a 31-day month). However, an alleged violation of the MMEL will be considered one violation for the purpose of assessing State mandatory minimum penalties. If no sample (daily discharge) is taken over a calendar month, no compliance determination can be made for that month with respect to effluent violation determination, but compliance determination can be made for that month with respect to reporting violation determination.

## J. Chronic Toxicity

This discharge is subject to determination of “Pass” or “Fail” and “Percent (%) Effect” from a chronic toxicity test at the discharge IWC using the *Test of Significant Toxicity (TST) statistical approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis (Ho) for the TST statistical approach is: Mean discharge IWC response  $\leq 0.75 \times$  Mean control response. A test result that rejects this null hypothesis is reported as “Pass”. A test result that does not reject this null hypothesis is reported as “Fail”. The relative “Percent (%) Effect” at the discharge IWC is defined and reported as:  $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100$ .

The Maximum Daily Effluent Limitation (MDEL) for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST statistical approach, results in “Fail” and the “Percent (%) Effect” is  $\geq 50$ .

The Median Monthly Effluent Limitation (MMEL) for chronic toxicity is exceeded and a violation will be flagged when the median of no more than three independent chronic toxicity tests conducted within the same calendar month—analyzed using the TST statistical approach—results in “Fail”. The MMEL for chronic toxicity shall only apply when there is a discharge more than one day in a calendar month. During a calendar month, exactly three independent toxicity tests are required when one toxicity test results in “Fail”.

## K. Mass and Concentration Limitations

Compliance with mass effluent limitations and concentration effluent limitations for the same parameter shall be determined separately. When the concentration for a parameter in a sample is reported as ND or DNQ, the corresponding mass emission rate determined using that sample concentration shall also be reported as ND or DNQ.

## L. Bacterial Standards and Analyses

The geometric mean used for determining compliance with bacterial standards is calculated using the following equation:

$$\text{Geometric Mean} = (C_1 \times C_2 \times \dots \times C_n)^{1/n}$$

where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 mL or CFU/100 mL) found on each day of sampling.

For bacterial analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 mL for total and fecal coliform, at a minimum, and 1 to 1000 per 100 mL for *Enterococcus*). The detection method used for each analysis shall be reported with the results of the analysis.

Detection methods used for coliforms (total and fecal) and *Enterococcus* shall be those presented in Table 1A of 40 C.F.R. section 136 (revised May 18, 2012), unless alternate methods have been approved by U.S.EPA pursuant to 40 C.F.R. section 136, or improved methods have been determined by the Executive Officer and/or U.S.EPA.

## ATTACHMENT A – DEFINITIONS

### **Arithmetic Mean ( $\mu$ )**

Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean =  $\mu = \Sigma x / n$       where:  $\Sigma x$  is the sum of the measured ambient water concentrations, and  $n$  is the number of samples.

### **Average Monthly Effluent Limitation (AMEL)**

The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

### **Average Weekly Effluent Limitation (AWEL)**

The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

### **Bioaccumulative**

Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

### **Carcinogenic**

Pollutants are substances that are known to cause cancer in living organisms.

### **Coefficient of Variation (CV)**

CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

### **Daily Discharge**

Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

### **Detected, but Not Quantified (DNQ)**

DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

### **Dilution Credit**

Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the

dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

**Dry Weather Event**

Any day when the maximum daily flow of the Los Cerritos Channel as measured at the Monitoring Station at Stearns Street is less than 23 cubic feet per second (cfs).

**Effluent Concentration Allowance (ECA)**

ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

**Enclosed Bays**

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

**Estimated Chemical Concentration**

The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

**Estuaries**

Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

**Inland Surface Waters**

All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

**Instantaneous Maximum Effluent Limitation**

The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

**Instantaneous Minimum Effluent Limitation**

The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

**Maximum Daily Effluent Limitation (MDEL)**

The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of

measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

**Median**

The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median =  $X_{(n+1)/2}$ . If n is even, then the median =  $(X_{n/2} + X_{(n/2)+1})/2$  (i.e., the midpoint between the n/2 and n/2+1).

**Method Detection Limit (MDL)**

MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 C.F.R. part 136, Attachment B, revised as of July 3, 1999.

**Minimum Level (ML)**

ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

**Mixing Zone**

Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

**Not Detected (ND)**

Sample results which are less than the laboratory's MDL.

**Persistent Pollutants**

Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

**Pollutant Minimization Program (PMP)**

PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

**Pollution Prevention**

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Resources Control Board (State Water Board) or Regional Water Board.

**Reporting Level (RL)**

The RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the ML's included in this Order, including an additional factor if applicable as discussed herein. The ML's included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

**Source of Drinking Water**

Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

**Standard Deviation ( $\sigma$ )**

Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:  
x is the observed value;  
 $\mu$  is the arithmetic mean of the observed values; and  
n is the number of samples.

**Toxicity Reduction Evaluation (TRE)**

TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

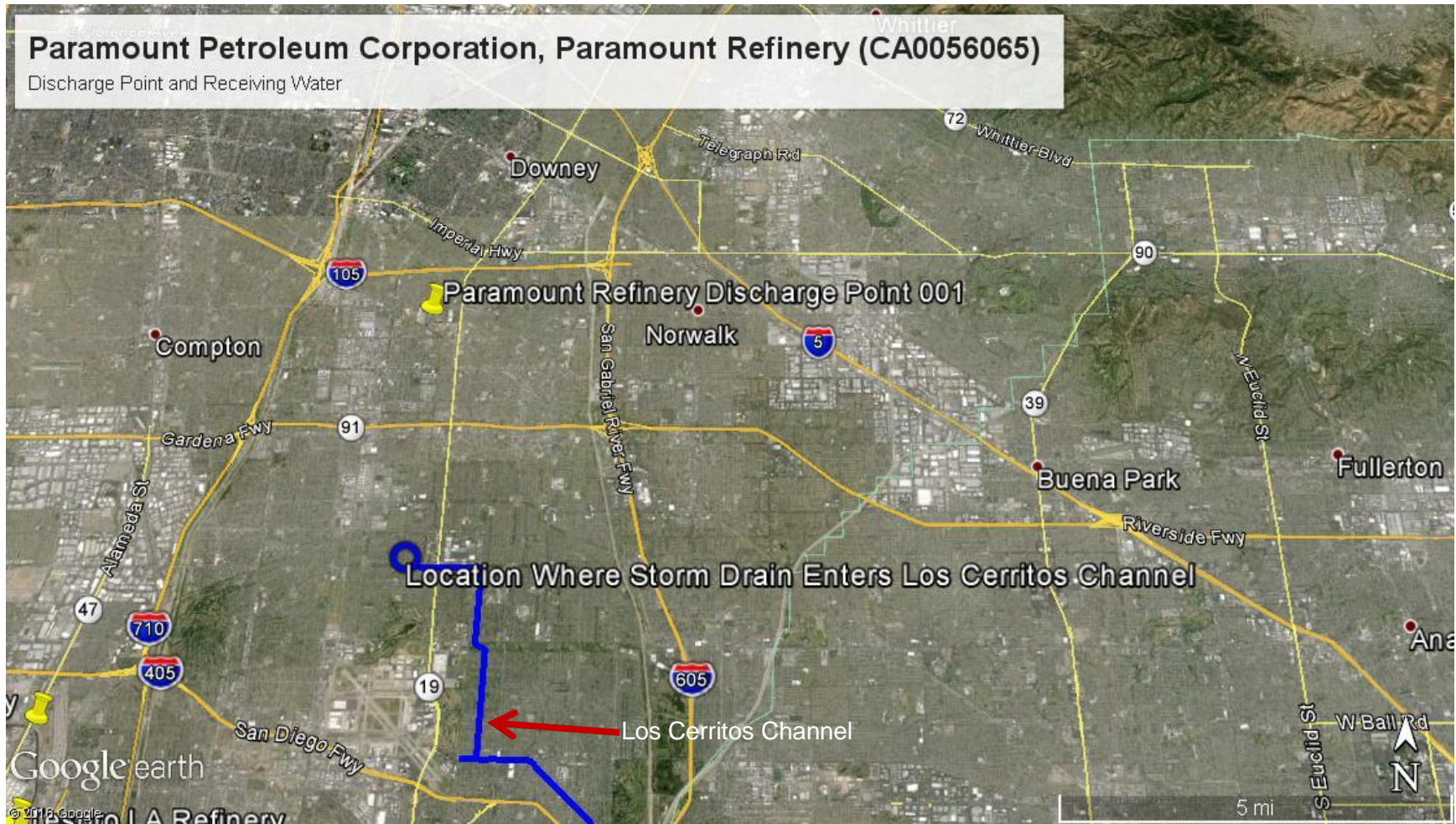
**Trash**

All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural material.

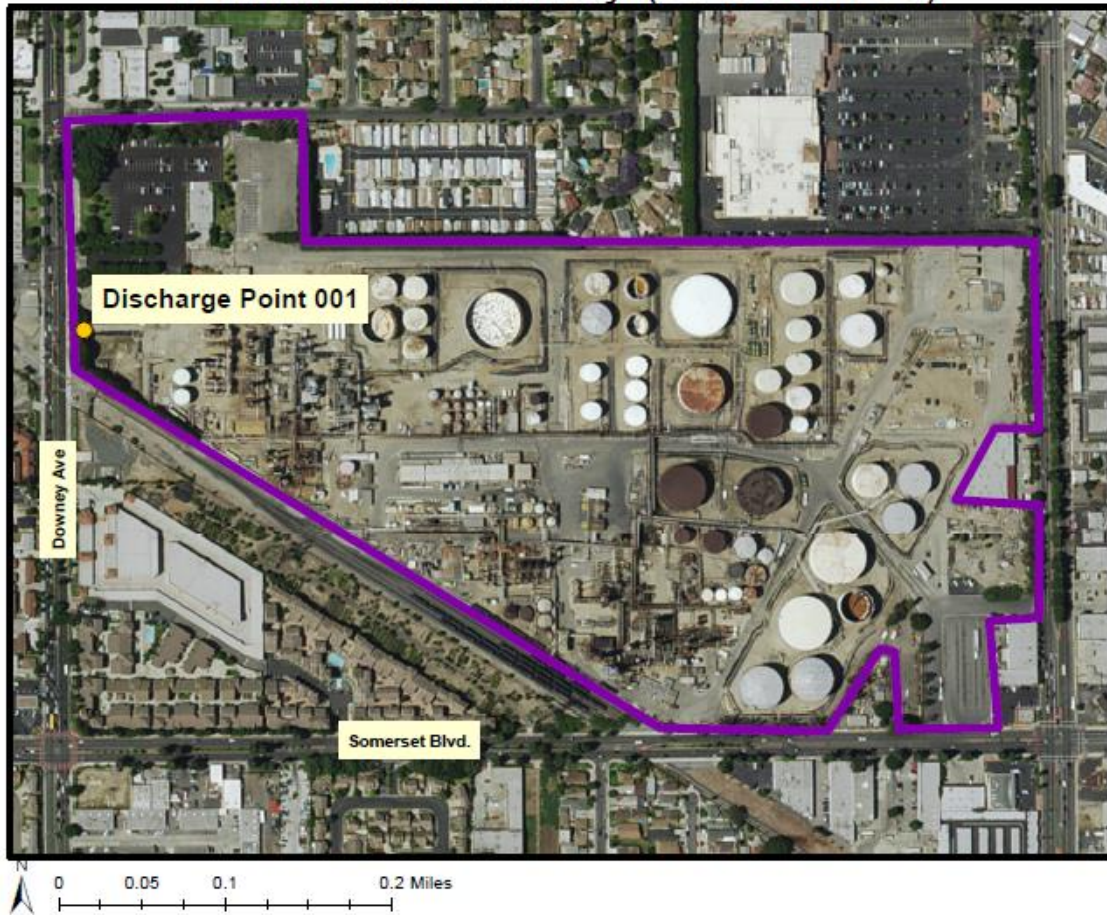
**Wet Weather Event**

Any day when the maximum daily flow of the Los Cerritos Channel as measured at the Monitoring Station at Stearns Street is equal to or greater than 23 cubic feet per second (cfs).

ATTACHMENT B – MAP



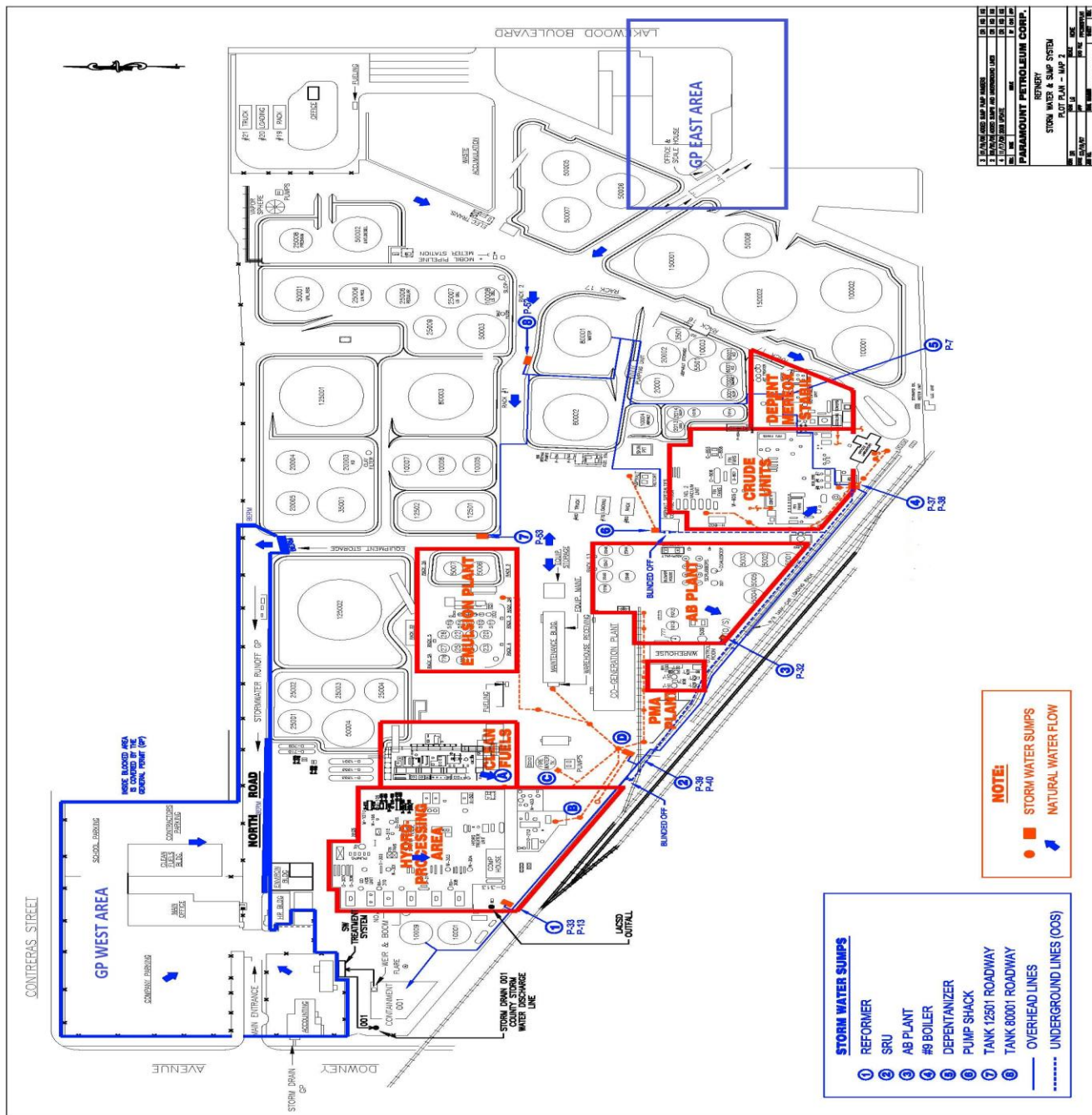
# Paramount Petroleum Corporation, Paramount Refinery (CA0056065)





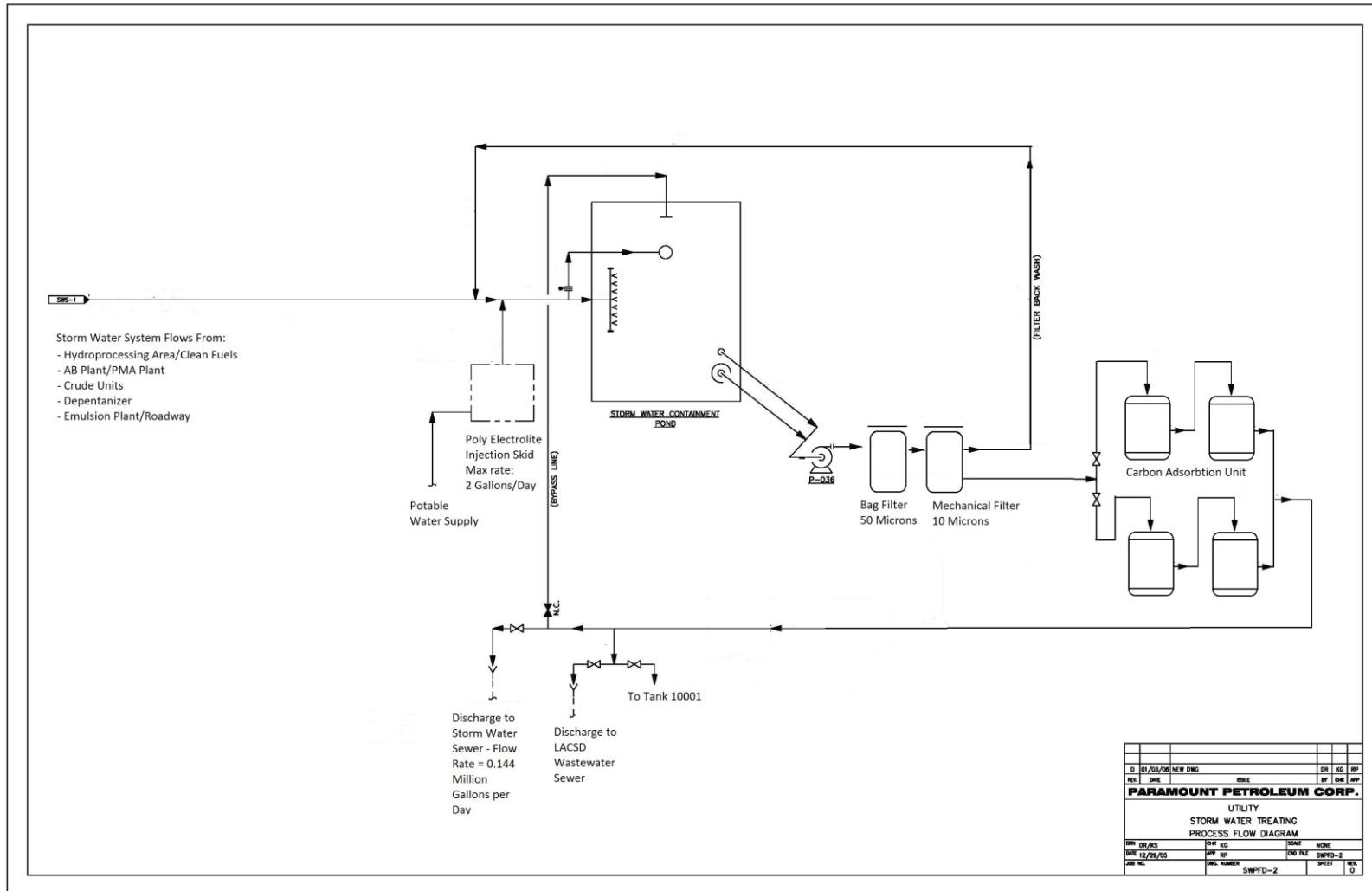
### STORM WATER FLOW SCHEMATIC

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ATTACHMENT C – FLOW SCHEMATIC



## ATTACHMENT D – STANDARD PROVISIONS

### I. STANDARD PROVISIONS – PERMIT COMPLIANCE

#### A. Duty to Comply

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

#### B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

#### C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

#### D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

#### E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

#### F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

## **G. Bypass**

1. Definitions
  - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
  - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
  - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
  - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
  - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

5. Notice

- a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass. The notice shall be sent to the Regional Water Board. As of December 21, 2020, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(i).)
- b. Unanticipated bypass. The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the Regional Water Board. As of December 21, 2020, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, 40C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(ii).)

**H. Upset**

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)
2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
  - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
  - b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
  - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
  - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

**II. STANDARD PROVISIONS – PERMIT ACTION**

**A. General**

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a

notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

**B. Duty to Reapply**

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

**C. Transfers**

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. §§ 122.41(l)(3), 122.61.)

**III. STANDARD PROVISIONS – MONITORING**

**A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)

**B.** Monitoring results must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. subchapters N or O. In the case of pollutants for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants. (40 C.F.R. §§ 122.41(j)(4), 122.44(i)(1)(iv).)

1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

2. The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N or O for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. chapter 1, subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 C.F.R. §§ 122.21(e)(3), 122.41(j)(4) 122.44(i)(1)(iv).)

**IV. STANDARD PROVISIONS – RECORDS**

**A.** Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

**B. Records of monitoring information shall include:**

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

**C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):**

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

**V. STANDARD PROVISIONS – REPORTING**

**A. Duty to Provide Information**

The Discharger shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Regional Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, §§ 13267, 13383.)

**B. Signatory and Certification Requirements**

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)
2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and
  - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)
  5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate 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.” (40 C.F.R. § 122.22(d).)

6. If documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 are submitted electronically by or on behalf of the NPDES-regulated facility, any person providing the electronic signature for such documents shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all of the relevant requirements of 40 C.F.R. part 3 (including, in all cases, subpart D of part 3) (Cross-Media Electronic Reporting) and 40 C.F.R. part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R § 122.22(e).)

### **C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the



DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

#### **D. Compliance Schedules**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5).)

#### **E. Twenty-Four Hour Reporting**

1. The Discharger shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (i.e., combined sewer overflow, sanitary sewer overflow, or bypass event), type of overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volume untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the event, and whether the noncompliance was related to wet weather.

As of December 21, 2020, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the Regional Water Board and must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J. The reports shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. The Regional Water board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours:
  - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)
  - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above required written report on a case-by case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

#### **F. Planned Changes**

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R. § 122.41(l)(1)(iii).)

**G. Anticipated Noncompliance**

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2).)

**H. Other Noncompliance**

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 C.F.R. part 127. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(7).)

**I. Other Information**

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

**J. Initial Recipient for NPDES Electronic Reporting Data**

The owner, operator, or the duly authorized representative of an NPDES-regulated entity is required to electronically submit the required NPDES information (as specified in appendix A to 40 C.F.R. part 127) to the appropriate initial recipient, as determined by U.S. EPA, and as defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 C.F.R. § 122.41(l)(9).)

**VI. STANDARD PROVISIONS – ENFORCEMENT**

- A.** The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.
- B.** The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved

under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions [section 122.41(a)(2)] [Water Code sections 13385 and 13387].

- C.** Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000 [40 C.F.R. section 122.41(a)(3)].
- D.** The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both [40 C.F.R. section 122.41(j)(5)].
- E.** The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both [40 C.F.R. section 122.41(k)(2)].

## VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

### A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):
  - a. 100 micrograms per liter ( $\mu\text{g/L}$ ) (40 C.F.R. § 122.42(a)(1)(i));
  - b. 200  $\mu\text{g/L}$  for acrolein and acrylonitrile; 500  $\mu\text{g/L}$  for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter ( $\text{mg/L}$ ) for antimony (40 C.F.R. § 122.42(a)(1)(ii));
  - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or
  - d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)
2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(2)):
  - a. 500 micrograms per liter ( $\mu\text{g/L}$ ) (40 C.F.R. § 122.42(a)(2)(i));
  - b. 1 milligram per liter ( $\text{mg/L}$ ) for antimony (40 C.F.R. § 122.42(a)(2)(ii));
  - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or
  - d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

**ATTACHMENT E – MONITORING AND REPORTING PROGRAM (CI-6038)**

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## ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Section 308 of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 C.F.R.) require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

### I. GENERAL MONITORING PROVISIONS

- A. An effluent sampling station shall be established for the point of discharge to the storm drain (Discharge Point 001 [latitude 33.899306 N, longitude -118.147694 W]) at the effluent sampling port located at the storm water treatment system and shall be located where representative samples of that effluent can be obtained.
- B. Laboratory Certification. Laboratories analyzing monitoring samples shall be certified by the State Water Board, Drinking Water Division, Environmental Laboratory Accreditation Program (ELAP) in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports. A copy of the laboratory certification shall be provided each time a new certification and/or renewal of the certification is obtained from ELAP.
- C. Effluent samples shall be taken downstream of any addition to treatment works and prior to mixing with the receiving waters.
- D. The Regional Water Board shall be notified in writing of any change in the sampling stations once established or in the methods for determining the quantities of pollutants in the individual waste streams.
- E. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. sections 136.3, 136.4, and 136.5 (revised August 19, 2014); or, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.
- F. For any analyses performed for which no procedure is specified in the U.S. EPA guidelines or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.
- G. Each monitoring report must affirm in writing that *“all analyses were conducted at a laboratory certified for such analyses by the State Water Board Division of Drinking Water or approved by the Executive Officer and in accordance with current U.S. EPA guideline procedures or as specified in this MRP”*.
- H. The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), and the Minimum Level (ML) for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported by one of the following methods, as appropriate:
  - 1. An actual numerical value for sample results greater than or equal to the ML; or
  - 2. “Detected, but Not Quantified (DNQ)” if results are greater than or equal to the laboratory’s MDL but less than the ML; or,
  - 3. “Not-Detected (ND)” for sample results less than the laboratory’s MDL with the MDL indicated for the analytical method used.

Analytical data reported as “less than” for the purpose of reporting compliance with permit limitations shall be the same or lower than the permit limit(s) established for the given parameter.

Current ML’s (Attachment H) are those published by the State Water Board in the Policy for the *Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, February 24, 2005.

- I. The MLs employed for effluent analyses to determine compliance with effluent limitations shall be lower than the effluent limitations established in this Order for a given parameter as per the sufficiently sensitive regulations at 40 C.F.R. section 122.44(i)(1)(iv). If the ML value is not below the effluent limitations, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory QA/QC procedures.
- J. The MLs employed for effluent analyses not associated with determining compliance with effluent limitations in this Order shall be lower than the lowest applicable water quality objective, for a given parameter as per the sufficiently sensitive regulations at 40 C.F.R. section 122.44(i)(1)(iv). Water quality objectives for parameters may be found in Chapter 3 of the Basin Plan and the CTR (40 C.F.R. section 131.38). If the ML value is not below the water quality objective, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test, the associated laboratory QA/QC procedures, reporting levels (RLs), and method detection limits (MDLs).

Where no U.S. EPA-approved method exists, the Regional Water Board, in consultation with the State Water Board Quality Assurance Program, shall establish a ML that is not contained in Attachment H to be included in the Discharger’s permit in any of the following situations:

- 1. When the pollutant under consideration is not included in Attachment H;
  - 2. When the Discharger and Regional Water Board agree to include in the permit a test method that is more sensitive than that specified in 40 C.F.R. part 136 (revised August 19, 2014);
  - 3. When the Discharger agrees to use an ML that is lower than that listed in Attachment H;
  - 4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment H, and proposes an appropriate ML for their matrix; or
  - 5. When the Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the U.S. EPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Regional Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.
- K. Water/wastewater samples must be analyzed within allowable holding time limits as specified in section 136.3. All QA/QC items must be run on the same dates the samples were actually analyzed, and the results shall be reported in the Regional Water Board format, when it becomes available, and submitted with the laboratory reports. Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the report.

- L.** Field analyses with short sample holding times such as pH, total residual chlorine, and temperature, may be performed using properly calibrated and maintained portable instruments by trained personnel acting on the Discharger's behalf, using methods in accordance with 40 C.F.R. part 136. All field instruments must be calibrated per manufacturer's instructions. A manual containing the standard operating procedures for all field analyses, including records of personnel proficiency training, instruments calibration and maintenance, and quality control procedures shall be maintained onsite, and shall be available for inspection by Regional Water Board staff. Information including instrument calibration, time of sample collection, time of analysis, name of analyst, quality assurance/quality control data, and measurement values shall be clearly documented during each field analysis and submitted to the Regional Water Board as part of the corresponding regular monitoring report.
- M.** All analyses shall be accompanied by the chain of custody, including but not limited to date and time of sampling, sample identification, and name of person who performed sampling, date of analysis, name of person who performed analysis, QA/QC data, method detection limits, analytical methods, copy of laboratory certification, and a perjury statement executed by the person responsible for the laboratory.
- N.** The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to insure accuracy of measurements, or shall insure that both equipment activities will be conducted.
- O.** The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Unless otherwise specified in the analytical method, duplicate samples must be analyzed at a frequency of 5% (1 in 20 samples) with at least one if there is fewer than 20 samples in a batch. A batch is defined as a single analytical run encompassing no more than 24 hours from start to finish. A similar frequency shall be maintained for analyzing spiked samples.
- P.** When requested by the Regional Water Board or U.S. EPA, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger must have a success rate equal to or greater than 80%.
- Q.** For parameters that both average monthly and daily maximum limits are specified and the monitoring frequency is less than four times a month, the following shall apply. If an analytical result is greater than the average monthly limit, the Discharger shall collect four additional samples at approximately equal intervals during the month, until compliance with the average monthly limit has been demonstrated. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later. In the event of noncompliance with an average monthly effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the average monthly effluent limitation has been demonstrated. The Discharger shall provide for the approval of the Executive Officer a program to ensure future compliance with the average monthly limit.
- R.** In the event wastes are transported to a different disposal site during the reporting period, the following shall be reported in the monitoring report:

  - 1. Types of wastes and quantity of each type;
  - 2. Name and address for each hauler of wastes (or method of transport if other than by hauling); and
  - 3. Location of the final point(s) of disposal for each type of waste.



If no wastes are transported off-site during the reporting period, a statement to that effect shall be submitted.

- S. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.

**II. MONITORING LOCATIONS**

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

**Table E-1. Monitoring Station Locations**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
<b>Effluent Monitoring</b>		
001	EFF-001	At the discharge point from the storm water treatment system, effluent sampling port, located where representative samples of the treated effluent discharged to the storm drain can be obtained [Latitude 33.899 N, Longitude -118.147 W]
<b>Receiving Water Monitoring</b>		
--	RSW-001	At a safe location where a representative sample of the receiving water (Los Cerritos Channel) can be obtained at least 50 feet upstream of the discharge point into the receiving water
--	RSW-002	At a safe location where a representative sample of the receiving water (Los Cerritos Channel) can be obtained downstream of the discharge point into the receiving water
--	RSW-003	Flow Gauge in Los Cerritos Channel at Stearns Street. Flow information is available by contacting pkinney@kinneticlabs.com or at (562)595-8700

**III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE**

**IV. EFFLUENT MONITORING REQUIREMENTS**

**A. Monitoring Location EFF-001**

1. The Discharger shall monitor storm water discharges at EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding ML. The Discharger must specify if petroleum or biofuel refining operations are occurring in the Self-monitoring Report.

**Table E-2. Effluent Monitoring at Monitoring Location EFF-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	GPD (gallons per day)	Meter	1/Day <sup>1</sup>	--
Biochemical Oxygen Demand (BOD) 5-day @20°C (BOD) <sup>2</sup>	mg/L, lbs/day	Grab	1/Discharge Event <sup>3</sup>	4
Oil and Grease <sup>2</sup>	mg/L, lbs/day	Grab	1/Discharge Event <sup>3</sup>	4
pH	standard units	Grab	1/Discharge Event <sup>3</sup>	4

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Suspended Solids (TSS) <sup>2</sup>	mg/L, lbs/day	Grab	1/Discharge Event <sup>3</sup>	4
Ammonia Nitrogen, Total (as N) <sup>2</sup>	mg/L	Grab	1/Discharge Event <sup>3</sup>	4
Chronic Toxicity	Pass or Fail, % effect	Grab	1/Year <sup>6</sup>	4, 7
Chemical Oxygen Demand (COD) <sup>2</sup>	mg/L, lbs/day	Grab	1/Discharge Event <sup>3</sup>	4
Di-isopropyl Ether (DIPE)	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Ethyl Tertiary Butyl Ether (ETBE)	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Methyl Tertiary Butyl Ether (MTBE)	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Phenolic Compounds <sup>2</sup>	µg/L, lbs/day	Grab	1/Discharge Event <sup>3</sup>	4
Settleable Solids	ml/L	Grab	1/Discharge Event <sup>3</sup>	4
Temperature	°F	Grab	1/Discharge Event <sup>3</sup>	4
Tertiary Amyl Methyl Ether (TAME)	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Tertiary Butyl Alcohol (TBA)	µg/L	Grab	1/Discharge Event <sup>3</sup>	4
Total Organic Carbon (TOC) <sup>2</sup>	mg/L, lbs/day	Grab	1/Discharge Event <sup>3</sup>	4
Total Petroleum Hydrocarbons (TPH) <sup>2</sup>	µg/L, lbs/day	Grab	1/Discharge Event <sup>3</sup>	10
Chromium, Total Recoverable <sup>2</sup>	µg/L, lbs/day	Grab	1/Discharge Event <sup>3</sup>	4
Chromium (VI) <sup>2</sup>	µg/L, lbs/day	Grab	1/Discharge Event <sup>3</sup>	4
Copper, Total Recoverable <sup>2</sup>	µg/L, lbs/day	Grab	1/Discharge Event <sup>3</sup>	4
Lead, Total Recoverable <sup>2</sup>	µg/L, lbs/day	Grab	1/Discharge Event <sup>3</sup>	4
Mercury, Total Recoverable <sup>2</sup>	µg/L, lbs/day	Grab	1/Discharge Event <sup>3</sup>	4
Zinc, Total Recoverable <sup>2</sup>	µg/L, lbs/day	Grab	1/Discharge Event <sup>3</sup>	4
<i>E. coli</i>	Most Probable Number (MPN)/100 ml	Grab	1/Year <sup>6, 11</sup>	4
Xylenes <sup>2</sup>	µg/L	Grab	1/Year <sup>6</sup>	4
TCDD Equivalents <sup>8</sup>	µg/L	Grab	1/Year <sup>6</sup>	4
Remaining Priority Pollutants <sup>9</sup>	µg/L	Grab	1/Year <sup>6</sup>	4

1. The Discharger shall measure flow using the flow meter on-site. The Discharger shall report the total daily flow (gallons/day). Total waste flow will indicate the volume of water (in gallons) discharged with each batch discharge event. The Discharger shall also calculate the daily average flow for each discharge event by dividing the total discharge flow by the number of days over which the discharge occurred; this shall represent the daily average flow (MGD). Periods of no flow shall also be reported.
2. The mass emission (lbs/day) for the discharge shall be calculated and reported using the limitation concentration and the actual flow rate measured at the time of discharge, using the formula:

$$M = 8.34 \times C_e \times Q, \text{ where: } M = \text{mass discharge for a pollutant, lbs/day}$$

$C_e$  = Reported concentration for a pollutant in mg/L

$Q$  = actual discharge flow rate.

3. During periods of extended discharge, no more than one sample per week (or 7-day period) is required. Sampling shall be performed during the first hour of discharge.
4. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; for priority pollutants, the methods must meet the lowest ML's specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding ML.
5. Detection methods used for E. coli shall be those presented in Table 1A of 40 C.F.R. part 136, unless alternate methods have been approved by U.S. EPA pursuant to 40 C.F.R. part 136 or improved methods have been determined by the Executive Officer and/or U.S. EPA.
6. Monitoring is only required during years in which discharge occurs. Annual samples shall be collected during the first discharge of the year. If there is no discharge to surface waters, the Discharger will indicate in the corresponding monitoring report, that no effluent was discharged to surface water during the reporting period.
7. The Discharger shall conduct Whole Effluent Toxicity monitoring as outlined in section V.
8. TCDD equivalents shall be calculated using the following formula, where the MLs and the toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the ML's to zero. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners.

$$\text{Dioxin-TEQ (TCDD equivalents)} = \sum(C_x \times \text{TEF}_x),$$

where:  $C_x$  = concentration of dioxin or furan congener x  
 $\text{TEF}_x$  = TEF for congener x

Congeners	Minimum Levels (pg/L)	Toxicity Equivalence Factor (TEF)
2,3,7,8 - tetra CDD	10	1.0
1,2,3,7,8 - penta CDD	50	1.0
1,2,3,4,7,8 - hexa CDD	50	0.1
1,2,3,6,7,8 - hexa CDD	50	0.1
1,2,3,7,8,9 - hexa CDD	50	0.1
1,2,3,4,6,7,8 - hepta CDD	50	0.01
Octa CDD	100	0.0001
2,3,7,8 - tetra CDF	10	0.1
1,2,3,7,8 - penta CDF	50	0.05
2,3,4,7,8 - penta CDF	50	0.5
1,2,3,4,7,8 - hexa CDF	50	0.1
1,2,3,6,7,8 - hexa CDF	50	0.1
1,2,3,7,8,9 - hexa CDF	50	0.1
2,3,4,6,7,8 - hexa CDF	50	0.1
1,2,3,4,6,7,8 - hepta CDFs	50	0.01
1,2,3,4,7,8,9 - hepta CDFs	50	0.01
Octa CDF	100	0.0001

9. Priority Pollutants as defined by the California Toxics Tule (CTR) defined in Attachment I to this Order.
10. TPH (C4-C12) as gasoline EPA Method 503.1 or 8015B; TPH as diesel (C13-C12)-EPA Method 503.1, 80151B or 8370; TPH as Waste Oil (C23+)-EPA Method 503.1, 8015B, or 8270.
11. If possible, not less than 5 samples equally spaced over a 30-day period must be collected once per year to evaluate compliance with the geometric mean limit.

## V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

### A. Chronic Toxicity

#### 1. Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity

The chronic toxicity IWC for this discharge at Discharge Point 001 is 100 percent effluent.

#### 2. Sample Volume and Holding Time

The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test and TIE studies. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.

#### 3. Chronic Freshwater Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity <1 ppt, the Discharger shall conduct the following chronic toxicity tests on effluent samples—at the in-stream waste concentration for the discharge—in accordance with species and test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002; Table IA, 40 CFR part 136). In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

- a. A static renewal toxicity test with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0).
- b. A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.01).
- c. A static renewal toxicity test with the green algae, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0).

#### 4. Species Sensitivity Screening

Species sensitivity screening shall be conducted during this permit's first required sample collection. The Discharger shall collect a single effluent sample and concurrently conduct three toxicity tests using the fish, an invertebrate, and the algae species previously referenced. This sample shall also be analyzed for the parameters required for the discharge, during that given month. As allowed under the test method for the *Ceriodaphnia dubia* and the Fathead minnow, a second and third sample may be collected for use as test solution renewal water as the seven-day toxicity test progresses. However, that same sample shall be used to renew both the *Ceriodaphnia dubia* and the Fathead minnow. The species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit cycle.

Rescreening is required at least once per five (5) years. The Discharger shall rescreen with the three species listed above and continue to monitor with the most sensitive species. If the first suite of rescreening tests demonstrates that the same species is the most sensitive, then the rescreening does not need to include more than one suit of tests. If a different species is the most sensitive, or if there is ambiguity, then the Discharger shall proceed with suites of screening tests using enough collected effluent for a minimum of three, but not to exceed five suites.

5. **Quality Assurance and Additional Requirements**

Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.

- a. The discharge is subject to determination of “Pass” or “Fail” and “Percent Effect” from a single-effluent concentration chronic toxicity test at the discharge IWC using the Test of Significant Toxicity (TST) statistical approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity* Implementation Document (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis (Ho) for the TST approach is: Mean discharge IWC response  $\leq 0.75 \times$  Mean control response. A test result that rejects this null hypothesis is reported as “Pass”. A test result that does not reject this null hypothesis is reported as “Fail”. The relative “Percent Effect” at the discharge IWC is defined and reported as:  $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100$ .
- b. The Median Monthly Effluent Limit (MMEL) for chronic toxicity only applies when there is a discharge more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests are required when one toxicity test results in “Fail”.
- c. Dilution water and control water, including brine controls, shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.
- d. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.). Monthly reference toxicant testing is sufficient.

All reference toxicant test results should be reviewed and reported according to EPA guidance on the evaluation of concentration-response relationships found in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 CFR section 136) (EPA 821-B-00-004, 2000).

- e. The Discharger shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the Monitoring and Reporting Program and the rationale is explained in the Fact Sheet (Attachment F).
6. **Preparation of an Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan**

The Discharger shall prepare and submit a generic Initial Investigation TRE Work Plan within 90 days of the permit effective date to be ready to respond to toxicity events. The Discharger shall review and update this work plan as necessary so it remains current and applicable to the discharge. At a minimum, the work plan shall include:

- a. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
  - b. A description of methods for maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in the operation of the Facility; and
  - c. If a TIE is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).
7. **Toxicity Identification Evaluation and Toxicity Reduction Evaluation Process**
- a. **Toxicity Identification Evaluation (TIE).** A toxicity test sample is immediately subject to TIE procedures to identify the toxic chemical(s), if a chronic toxicity test shows "Fail and % Effect value  $\geq 50$ ". The Discharger shall initiate a TIE using, as guidance, EPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.
  - b. **Toxicity Reduction Evaluation (TRE).** When a toxicant or class of toxicants is identified, a TRE shall be performed for that toxicant. The TRE shall include all reasonable steps to identify the source(s) of toxicity and discuss appropriate BMPs to eliminate the causes of toxicity. No later than 30 days after the source of toxicity and appropriate BMPs and/or treatment are identified, the Discharger shall submit a TRE Corrective Action Plan to the Executive Officer for approval. At minimum, the plan shall include:
    - i. The potential sources of pollutant(s) causing toxicity.
    - ii. Recommended BMPs and/or treatment to reduce the pollutant(s) causing toxicity.
    - iii. Follow-up monitoring to demonstrate that toxicity has been removed.
    - iv. Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.
    - v. A schedule for these actions, progress reports, and the final report.
  - c. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.
  - d. The Discharger shall conduct routine effluent monitoring for the duration of the TIE/TRE process.

- e. The Regional Water Board recognizes that toxicity may be episodic and identification of causes and reduction of sources of toxicity may not be successful in all cases. The TRE may be ended at any stage if monitoring finds there is no longer toxicity.

## 8. Reporting

The Self-Monitoring Report (SMR) shall include a full laboratory report for each toxicity test. This report shall be prepared using the format and content of the test methods manual chapter called Report Preparation, including:

- a. The toxicity test results for the TST approach, reported as "Pass" or "Fail" and "Percent Effect" at the chronic toxicity IWC for the discharge.
- b. Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).
- c. TRE/TIE results. The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses.
- d. Statistical program (e.g., TST calculator, CETIS, etc.) output results for each toxicity test.

## B. Ammonia Removal

1. Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from bioassay samples. The Discharger must demonstrate the effluent toxicity is caused by ammonia because of increasing test pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following may be steps to demonstrate that the toxicity is caused by ammonia and no other toxicants before the Executive Officer would allow for control of pH in the test.
  - a. There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.
  - b. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.
  - c. Conduct graduated pH tests as specified in the toxicity identification evaluation methods. For example, mortality should be higher at pH 8 and lower at pH 6.
  - d. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.
2. When it has been demonstrated that toxicity is due to ammonia because of increasing test pH, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent, after submitting a written request to the Regional Water Board, and receiving written permission expressing approval from the Executive Officer of the Regional Water Board.

## C. Chlorine Removal

Except with prior approval from the Executive Officer of the Regional Water Board, chlorine shall not be removed from bioassay samples

**VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE**

**VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE**

**VIII. RECEIVING WATER MONITORING REQUIREMENTS**

**A. Surface Water Monitoring Location RSW-001-Upstream of Discharge Point**

1. The Discharger shall monitor the Los Cerritos Channel at RSW-001 as follows:

**Table E-3. Receiving Water Monitoring Requirements – RSW-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	standard units	Grab <sup>1</sup>	1/Year <sup>2</sup>	3,4
Ammonia Nitrogen, Total (as N)	mg/L	Grab <sup>1</sup>	1/Year <sup>2</sup>	3,4
Dissolved Oxygen	mg/L	Grab	1/Year <sup>2</sup>	3,4
Temperature	°F	Grab <sup>1</sup>	1/Year <sup>2</sup>	3,4
Hardness	mg/L	Grab	1/Year <sup>2</sup>	3,4
<i>E. coli</i>	Most Probable Number (MPN)/100 ml	Grab	1/Year <sup>6</sup>	3
TCDD Equivalents <sup>5</sup>	µg/L	Grab	1/Year <sup>2</sup>	3
Priority Pollutants <sup>6</sup>	µg/L	Grab <sup>1</sup>	1/Year <sup>2</sup>	3

1. pH and temperature must be collected at the same time as ammonia and priority pollutant samples.
2. Receiving water monitoring is required only during years in which a discharge has occurred. Annual samples shall be collected from the first storm event of the wet season (October 1 – May 30). Sampling shall be during the first hour of discharge or at the first safe opportunity. If no discharge occurs, no monitoring is required.
3. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; for priority pollutants, the methods must meet the lowest ML's specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding ML.
4. Receiving water pH, temperature, dissolved oxygen and hardness shall be collected at the same time the effluent samples (Monitoring Location EFF-001) are collected for ammonia and priority pollutant analyses. A hand-held field meter may be used for pH and temperature, provided the meter utilizes an U.S. EPA approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.
5. TCDD equivalents shall be calculated using the following formula, where the ML's and the toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the ML's to zero. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners.

$$\text{Dioxin-TEQ (TCDD equivalents)} = \sum(Cx \times \text{TEF}_x)$$

where: Cx = concentration of dioxin or furan congener x  
 TEF<sub>x</sub> = TEF for congener x



Congeners	Minimum Levels (pg/L)	Toxicity Equivalence Factor (TEF)
2,3,7,8 - tetra CDD	10	1.0
1,2,3,7,8 - penta CDD	50	1.0
1,2,3,4,7,8 - hexa CDD	50	0.1
1,2,3,6,7,8 - hexa CDD	50	0.1
1,2,3,7,8,9 - hexa CDD	50	0.1
1,2,3,4,6,7,8 - hepta CDD	50	0.01
Octa CDD	100	0.0001
2,3,7,8 - tetra CDF	10	0.1
1,2,3,7,8 - penta CDF	50	0.05
2,3,4,7,8 - penta CDF	50	0.5
1,2,3,4,7,8 - hexa CDF	50	0.1
1,2,3,6,7,8 - hexa CDF	50	0.1
1,2,3,7,8,9 - hexa CDF	50	0.1
2,3,4,6,7,8 - hexa CDF	50	0.1
1,2,3,4,6,7,8 - hepta CDFs	50	0.01
1,2,3,4,7,8,9 - hepta CDFs	50	0.01
Octa CDF	100	0.0001

- Priority Pollutants as defined by the CTR defined in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment I.

**B. Surface Water Monitoring Location RSW-002-Downstream of Discharge Point**

- The Discharger shall monitor the Los Cerritos Channel at RSW-002 as follows:

**Table E-4. Receiving Water Monitoring Requirements – RSW-002**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	standard units	Grab <sup>1</sup>	1/Year <sup>2</sup>	3
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Year <sup>1</sup>	3
Dissolved Oxygen	mg/L	Grab	1/Year <sup>1</sup>	3
Temperature	°F	Grab <sup>1</sup>	1/Year <sup>1</sup>	3

- pH, dissolved oxygen and temperature must be collected at the same time as ammonia.
- Receiving water monitoring is required only during years in which a discharge has occurred. Annual samples shall be collected from the first storm event of the wet season (October 1 – May 30). If no discharge occurs, no monitoring is required.
- Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; for priority pollutants, the methods must meet the lowest MLs specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding ML.

**C. Surface Water Monitoring Location RSW-003-Los Cerritos Channel at Stearns Street**

The Discharger shall report the maximum daily flow in the Los Cerritos Channel at Stearns Street. The stream flow data can be obtained by contacting Patrick Kinney at [pkinney@kinneticlabs.com](mailto:pkinney@kinneticlabs.com) or by calling (562)595-8700. During lower flow conditions, below 23 cfs, Kinnetic labs may not be able to collect flow. In these circumstances, the Discharger

shall 1) indicate in the self-monitoring report (SMR) that stream flow was insufficient to record a measurement and 2) report flow as "<23 cfs". This information is necessary to determine the wet weather and dry weather conditions of the Channel, as defined in the Los Cerritos Channel TMDL for Metals.

## **IX. OTHER MONITORING REQUIREMENTS**

### **A. Rainfall Monitoring**

The Discharger shall measure and record the rainfall on each day of the month or submit the data obtained from the nearest city/county operated rain gauge monitoring station. This information shall be included in the monitoring report for that month.

### **B. Visual Observation**

The Discharger shall make visual observations of all storm water discharge locations on at least one storm event per month that produces a significant storm water discharge to observe the presence of trash, floating and suspended materials, oil and grease, discoloration, turbidity, and odor. A "significant storm water discharge" is a continuous discharge of storm water for a minimum of one hour, or the intermittent discharge of storm water for a minimum of 3 hours in a 12-hour period.

## **X. REPORTING REQUIREMENTS**

### **A. General Monitoring and Reporting Requirements**

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. If there is no discharge during any reporting period, the Discharger shall indicate under penalty of perjury in the corresponding monitoring report that no effluent was discharged to surface water during the reporting period.
3. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.
4. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.
5. The Discharger shall report the results of chronic toxicity testing, TRE and TIE as required in Attachment E, Monitoring and Reporting, section V.

### **B. Self-Monitoring Reports (SMRs)**

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). The CIWQS Web site will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.
2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit quarterly SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more

frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table E-5. Monitoring Periods and Reporting Schedule**

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	February 1, 2017	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	May 1 August 1 November 1 February 1
1/Day	February 1, 2017	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	May 1 August 1 November 1 February 1
1/Discharge Event	February 1, 2017	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
Monthly	February 1, 2017	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
Annually	October 1, 2017	January 1 through December 31	February 1

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy ( $\pm$  a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
- d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to

calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. **Compliance Determination.** Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).
6. **Multiple Sample Data.** When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of “Detected, but Not Quantified” (DNQ) or “Not Detected” (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
  - a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
  - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.
7. The Discharger shall submit SMRs in accordance with the following requirements:
  - a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
  - b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

### C. Discharge Monitoring Reports (DMRs)

1. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic submittal of DMRs will be in addition to electronic submittal of SMRs. Information about electronic submittal of DMRs is provided by the Discharge Monitoring Report website as follows:  
[\(http://www.waterboards.ca.gov/water\\_issues/programs/discharge\\_monitoring/\)](http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/).

**D. Other Reports**

1. Within 90 days of the effective date of this permit, the Discharger is required to submit the following to the Regional Water Board:
  - i. Initial Investigation TRE workplan
  - ii. Updated SWPPP
  - iii. Updated BMPP
  - iv. Spill Contingency Plan

The SWPPP, BMPP, and Spill Contingency Plan status shall be reviewed at a minimum once per year and updated as needed to ensure all actual or potential sources of pollutants in wastewater and storm water discharged from the facility are addressed. All changes or revisions to the SWPPP, BMPP, and Spill Contingency Plan shall be submitted to the Regional Water Board within 30 days of revisions.

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**ATTACHMENT F – FACT SHEET**

As described in section II.B of this Order, the Regional Water Board incorporates this Fact Sheet as findings of the Regional Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

**I. PERMIT INFORMATION**

The following table summarizes administrative information related to the facility.

**Table F-1. Facility Information**

<b>WDID</b>	4B192348001
<b>Discharger</b>	Paramount Petroleum Corporation
<b>Name of Facility</b>	Paramount Petroleum Refinery
<b>Facility Address</b>	14700 Downey Avenue
	Paramount, California 90723
	Los Angeles County
<b>Facility Contact, Title and Phone</b>	Kathryn Gleeson, Environmental Manager (562) 748-4613
<b>Authorized Person to Sign and Submit Reports</b>	Glenn Clausen, Vice President, West Coast Refining, (562) 748-4789
<b>Mailing Address</b>	14700 Downey Avenue, Paramount, California 90723
<b>Billing Address</b>	SAME
<b>Type of Facility</b>	Renewable Fuels Refinery; Former (and Potentially Future) Petroleum Refinery (SIC 2911)
<b>Major or Minor Facility</b>	Minor
<b>Threat to Water Quality</b>	2
<b>Complexity</b>	B
<b>Pretreatment Program</b>	Not Applicable
<b>Recycling Requirements</b>	Not Applicable
<b>Facility Permitted Flow</b>	0.144 million gallons per day (MGD)
<b>Facility Design Flow</b>	0.144 MGD emergency discharge
<b>Watershed</b>	Los Cerritos Channel Watershed
<b>Receiving Water</b>	Los Cerritos Channel
<b>Receiving Water Type</b>	Inland Surface Water

- A. Paramount Petroleum Corporation (hereinafter Discharger) is the owner and operator of the Paramount Petroleum Refinery (hereinafter Facility), a former petroleum refinery which now refines animal fats (technical grade beef tallow) and vegetable oils to produce renewable fuels. The facility retains the capability to resume petroleum refining.

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.



- B.** The Facility discharges storm water to the Los Cerritos Channel, a water of the United States. The Discharger was previously regulated by Order No. R4-2011-0050 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0056065 adopted on March 3, 2011, and expired on February 10, 2016. The Order has been administratively extended as per 40 CFR 122.6 and remains in effect until a new permit is adopted. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.
- C.** The Discharger filed a report of waste discharge and submitted an application for reissuance of its WDRs and NPDES permit on August 6, 2015. Supplemental information was received by letters dated September 15 and September 30, 2015. The application was deemed complete on October 13, 2015. A site visit was conducted on December 10, 2015, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.
- D.** Regulations at 40 C.F.R. section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. However, pursuant to California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

## **II. FACILITY DESCRIPTION**

The discharger operates renewable fuels refinery (formerly a petroleum refinery) located at 14700 Downey Avenue, Paramount, California. The refinery occupies an area in the City of Paramount, California, which is bounded by Lakewood Boulevard to the east, Somerset Avenue and a railroad right-of-way to the south, Downey Avenue to the west, and Contreras Street, residential and commercial properties to the north. This property contains offices, refinery process units, above ground storage tanks and refined product distribution racks associated with the Paramount operation. The total area of the facility is approximately 65 acres.

Until recently, the Facility operated as a refinery for crude petroleum (SIC 2911). The Facility has recently been operating as refinery of renewable fuels, or biofuels. The Facility is not currently processing crude oil; however, the crude units still exist on the site and may potentially be used in the future if the facility resumes petroleum refining. The Facility receives technical grade beef tallow delivered by rail and/or truck for refining into fuel. Feedstock may also consist of vegetable oils which is stored in an 80,000-barrel tank. Current production capacity for renewable fuels is 2500 barrels per day, with a maximum permitted production capacity of 3500 barrels per day.

Processing areas include the crude units, hydroprocessing (including clean fuel processing) and two asphalt plants (including emulsion, asphalt air blowing, and polymer modified asphalt plants), although the Facility is not currently operating the crude units, clean fuels hydroprocessing and asphalt plants. Renewable fuels processing occurs in the area formerly used for hydroprocessing. Products from the renewable fuel processing are propane, naphtha, jet fuel and diesel. Propane may be sold or used as fuel gas on-site. The naphtha may be sold as-is or blended into gasoline or gasoline blendstock, and shipped off-site by truck. The jet fuel and diesel are blended with commercial jet fuel and diesel before being shipped out, mainly by pipeline or truck.

The site includes approximately 120 above ground storage tanks, mostly located on the north and east areas. Some crude oil, product additive, and boiler and cooling water treatment chemicals are stored on-site. There are 26 loading and/or unloading truck racks on the site, and two rail car loading facilities.

**A. Description of Wastewater and Biosolids Treatment Controls**

Process wastewater and water from groundwater remediation are treated via an oil-water separator, induced air flotation, air stripping and chemical polishing before being discharged to the local publically owned treatment works (POTW). Process wastewater is not included as a discharge authorized by this Order. Storm water in the processing areas generally flows towards the south of the facility while storm water from the non-process areas flows along the refinery's north road. The Facility's strategy for storm water management is primarily to contain it on site and route it through either the oily water system or the storm water treatment system for discharge to the sanitary sewer under Los Angeles City Sanitation District (LACSD) permit No. 017236 (up to 280,000 gallons per day [gpd]). If storm water accumulation exceeds the amount allowed by the LACSD permit, runoff is routed to the storm water treatment system and is discharged under this Order.

In addition to storm water, the Facility periodically generates fire test water from multiple sources, allowing it to accumulate on the ground where, during dry weather, it would mostly evaporate or infiltrate; however, fire test water was also observed on the ground during the site visit when there was light precipitation, indicating it could commingle with storm water and potentially be discharged during wet weather. Discharge of fire test water that may commingle with storm water is expressly prohibited in this Order; thus, in the future, the Facility must manage fire test water such that there is no fire test water present on the ground during storm events that could potentially commingle with storm water and result in a discharge. The fire system test has a typical duration of about 20 minutes and operations are performed once or twice per year, resulting in a discharge volume from all sources totaling approximately 189,500 gallons per year.

Several containment troughs are located within the rail loading area. Storm water that collects in these structures is routed to a small adjacent holding pond. The water that accumulates in the pond is allowed to evaporate or it is disposed of via vacuum truck if the pond reaches capacity. The rail offloading containment structures may also be tied into the storm water treatment system or may be directed to the process wastewater treatment system, which is permitted under the LACSD permit.

The Facility maintains a temporary hazardous waste storage area in the northeast section of the site. The hazardous waste storage area includes a bermed area for storing drums and a bermed container rinse area. Roll-off bins containing non-hazardous soil are also stored in this area. Water that accumulates in the catch basin for the rinse area is transported via vacuum truck to the process wastewater treatment system. This treated process wastewater is discharged to the sanitary sewer.

The site is composed of both earthen and paved areas. The Tank Farm areas are earthen, with a groundwater recovery system designed to detect any contamination entering ground water in the tank farm area. Water from the ground water recovery system is routed to the process wastewater treatment system.

**Storm Water Treatment System.** Storm water collects in drains throughout the process and non-process areas and is pumped and conveyed mainly via pipe to an unlined pond located on the west side of the site. Polymer is injected into the storm water as it enters the pond. The pond is equipped with a fountain structure which is not used. Plastic liner material has been installed on the side of the pond and a slotted pipe is used to make the flow into the pond more laminar and smooth. Flocculation and sedimentation occur within the pond. Prior to discharge from the pond, solids and oils are controlled by a weir and skirted boom that surround the discharge pump area. Some storm water from adjacent areas may flow directly into the pond through sheet flow or small depressions.

Storm water exiting the pond is further treated via two sediment filters, a bag filter, and a mechanical polishing filter which removes fine particulates prior to entry into carbon adsorption units. There are two treatment trains of carbon adsorption units. Each train consists of two activated carbon vessels in series. The second set of carbon vessels can be switched on and off to provide redundancy/backup when there is breakthrough of the first set.

This permit addresses the discharge to the storm drain only in an emergency. The Discharger's normal procedure is to discharge storm water to the Los Angeles County Sanitation District (LACSD) permitted outfall. Discharge to the storm drain (to Los Cerritos Channel) would only occur when the Facility cannot contain storm water in the pond and the wastewater tanks are filled to capacity during heavy rains. Under these circumstances, the Discharger would activate the storm water treatment system immediately and discharge to the storm drain on the west side of the holding pond. The maximum emergency storm water discharged to the storm drain on Downey Avenue through Discharge Point 001 is 0.144 million gallons per day (MGD). No discharges were reported during the permit term, from April 2, 2011 through February 10, 2016.

**B. Discharge Points and Receiving Waters**

Up to 0.144 million gallons per day (MGD) of treated storm water may be discharged from Discharge Point 001 to the Los Cerritos Channel, a water of the United States. The location of Discharge Point 001 is latitude: 33.899 N and longitude: -118.147 W.

**C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data**

1. Effluent limitations contained in the existing Order for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from two monitoring events in 2008 and 2010 are as follows:

**Table F-2. Historic Effluent Limitations and Monitoring Data for Final Discharge Locations**

Parameter	Units	Effluent Limitation			Range of Reported Concentrations <sup>1</sup>
		Average Monthly	Maximum Daily	Instantaneous Maximum	
Flow	MGD	--	0.144	--	0.0000020 – 0.09355
pH	standard units	Between 6.5 and 8.5			5.9 – 5.97
Temperature	°F	--	--	86	55 – 60
Biochemical Oxygen Demand (5-day@20°C) (BOD)	mg/L	--	30	--	<3
	lbs/day	--	36	--	NA
Total Suspended Solids (TSS)	mg/L	--	75	--	13 – 16
	lbs/day	--	90	--	16-19
Oil and Grease	mg/L	--	15	--	<1.0
Arsenic, Total Recoverable	µg/L	--	50	--	<0.2 - <10
	lbs/day	--	0.06	--	NA
Cadmium, Total Recoverable	µg/L	--	3.7	--	<0.1
	lbs/day	--	0.004	--	NA
Chromium (VI)	µg/L	--	15	--	<0.2
	lbs/day	--	0.02	--	NA
Copper, Total Recoverable	µg/L	--	9.8	--	ND
Lead, Total Recoverable	µg/L	--	56	--	ND
Mercury, Total Recoverable	µg/L	--	2	--	ND

Parameter	Units	Effluent Limitation			Range of Reported Concentrations <sup>1</sup>
		Average Monthly	Maximum Daily	Instantaneous Maximum	
	lbs/day	--	0.0024	--	NA
Selenium, Total Recoverable	µg/L	--	10	--	<0.3
	lbs/day	--	0.01	--	NA
Silver, Total Recoverable	µg/L	--	3.4	--	<0.1
	lbs/day	--	0.004	--	NA
Zinc, Total Recoverable	µg/L	--	96	--	27-458
Benzene	µg/L	--	1	--	<1
	lbs/day	--	0.001	--	NA
Ethylbenzene	µg/L	--	700	--	<1
	lbs/day	--	0.84	--	NA
Toluene	µg/L	--	150	--	<1
	lbs/day	--	0.18	--	NA
Phenolic Compounds <sup>2</sup>	µg/L	--	1	--	<10
	lbs/day	--	0.001	--	NA
Total Organic Carbon (TOC)	µg/L <sup>3</sup>	--	110	--	1000 - 3000
Xylene	µg/L	--	1750	--	<1
	lbs/day	--	2.10	--	NA
Total Petroleum Hydrocarbons (TPH)	µg/L	--	100	--	<1
	lbs/day	--	0.12	--	NA
Acute Toxicity	%	4			90

1. No discharges occurred during the term of Order No. R4-2011-0050. Results of two monitoring events that occurred in 2008 and 2010 under Order No. R4-2005-0082 are presented here.  
 NA= Not Applicable, ND= Not Detected
2. Phenolic compounds include the sum of the following individual chlorinated and non-chlorinated phenolic compounds: 2-chlorophenol; 2-nitrophenol; phenol; 2,4-dimethylphenol; 2,4-dichlorophenol; 2,4,6-trichlorophenol; 4-chloro-3-methylphenol; 2,4-dinitrophenol; 2-methyl-4,6-dinitrophenol; pentachlorophenol; and 4-nitrophenol.
3. Order No. R4-2011-0050 included incorrect units for the TOC limit; the correct units should be mg/L rather than µg/L. As a result, the MDEL should have been 110 mg/L; the range of reported concentrations is 1000 µg/L to 3000 µg/L, or 1 mg/L to 3 mg/L, were within the current limit.
4. Average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test producing less than 70% survival.

**D. Compliance Summary**

The Facility has not discharged during the term of the existing Order and consequently, no exceedances of effluent limitations have been identified.

On June 15, 2011, the Regional Water Board issued a Notice of Violation (NOV) to the Facility for failure to implement control of pollutant sources and appropriate use of BMPs as cited during an inspection on April 26, 2011. The Discharger submitted a response to the NOV on July 15, 2011, which stated that steps had been taken to clean up and contain drips and that an updated Storm Water Management Plan (SWMP)/Best Management Practices Plan (BMPP) and Spill Prevention Control and Countermeasure (SPCC) plans had been submitted to the Regional Water Board as required by Order No. R4-2011-0050.

**E. Planned Changes**

The facility is currently operating as a biofuel refinery. Plans include the potential transition back to a petroleum refinery.

**III. APPLICABLE PLANS, POLICIES, AND REGULATIONS**

The requirements contained in this Order are based on the requirements and authorities described in this section.

**A. Legal Authorities**

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters.

**B. California Environmental Quality Act (CEQA)**

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code.

**C. State and Federal Laws, Regulations, Policies, and Plans**

- Water Quality Control Plan.** The Regional Water Board adopted a *Water Quality Control Plan for the Los Angeles Region* (hereinafter Basin Plan) on June 13, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the Los Cerritos Channel are as follows:

**Table F-3. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Los Cerritos Channel (Hydrologic Unit No. 405.15)	<u>Existing:</u> Wildlife Habitat (WILD) <u>Intermittent:</u> Warm Freshwater Habitat (WARM), Non-Contact Water Recreation (REC-2) <u>Potential:</u> Municipal and Domestic Supply (MUN)*, Contact Water Recreation (REC-1)

\*MUN designations are designated under SB 88-63 and RB 89-03. Some designations may be considered for an exemption at a later date (See pages 2-3 and 2-4 of the Basin Plan for more details).

Requirements of this Order implement the Basin Plan.

- Thermal Plan.** The State Water Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on January 7, 1971, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. Requirements of this Order implement the Thermal Plan. Additionally, a white paper was developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen*

*Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region.* The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. A maximum effluent temperature limitation of 86°F was determined to be appropriate for protection of aquatic life. Therefore, a maximum temperature effluent limitation of 86°F is included in this Order.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.
4. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
5. **Antidegradation Policy.** Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California"). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.
6. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.
7. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The discharger is responsible for meeting all requirements of the applicable Endangered Species Act.
8. **Part 1 Trash Provisions Requirements.** The State Water Board adopted the *"Amendment to the Ocean Plan and Part I Trash Provisions of the Water Quality Control*

*Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California*" (Trash Amendments) through Resolution 2015-0019, which was approved by OAL on December 2, 2015 and became effective upon U.S. EPA approval on January 12, 2016. The Trash Amendments apply to all surface waters of the State, with the exception of those waters within the jurisdiction of the Los Angeles Regional Water Board where trash or debris TMDLs are in effect prior to the effective date of the Trash Amendments. The discharge described in this Order may be subjected to the Trash Provisions as there are currently no Trash TMDLs for the Los Cerritos Channel. The Trash Amendments established a narrative water quality objective for trash and a prohibition on the discharge of trash, implemented through permits issued pursuant to CWA section 402(p), waste discharge requirements, or waivers of waste discharge requirements. No specific implementation provisions were prescribed for individual industrial permittees, and no references were made to the monitoring and reporting requirements for individual industrial permits.

This Order incorporates the requirements of the Trash Provisions through the prohibition of trash discharges to the NPDES discharge points. The Facility's discharges consist of treated storm water. Therefore, discharge from the Facility is not expected to be a significant contributor of trash. The Trash Provisions did not prescribe specific monitoring and reporting requirements applicable to the Discharger; therefore, this Order requires the Discharger to develop and implement a Storm Water Pollution Prevention Plan (SWPPP), which shall include specific BMPs used as storm water and authorized non-storm water control measures that the Discharger will undertake to prevent the discharge of trash from the Facility to the Los Cerritos Channel Watershed.

#### **D. Impaired Water Bodies on CWA 303(d) List**

Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d)-listed water bodies and pollutants, the Regional Water Board plans to develop and adopt TMDLs that will specify waste load allocations (WLAs) for point sources and load allocations (LAs) for non-point sources, as appropriate.

Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 2012 303(d) list and have been scheduled for TMDL development. On July 30, 2015, U.S.EPA approved California's 2012 Section 303(d) list of water quality limited segments.

The Facility discharges into the Los Cerritos Channel. The 2012 State Water Resources Control Board (State Water Board) California 303(d) List includes the classification of the Los Cerritos Channel. The listing applies to the tidal portion of the channel, with the area affected being described as 31 acres. The pollutants of concern include ammonia, bis(2-ethylhexyl)phthalate, chlordane (sediment), coliform bacteria, copper, lead, zinc, pH and trash. Impairments due to copper, lead, and zinc are addressed through the U.S. EPA Los Cerritos Channel TMDL for Metals and through the Regional Water Board Implementation Plan for Total Maximum Daily Load for Metals in the Los Cerritos Channel. TMDLs have not yet been established for the remaining pollutants of concern. The provisions included in this Order implement and are consistent with the assumptions and requirements of all WLAs established in TMDLs that are applicable to the discharge from this Facility.

1. **Los Cerritos Channel TMDL for Metals.** On March 17, 2010, the U.S. EPA established the Los Cerritos Channel TMDL for Metals. The TMDL establishes a dry-weather WLA for copper and wet-weather WLAs for copper, lead, and zinc applicable to all sources in

the watershed. Therefore, the TMDL is applicable to this discharge and will be implemented in this permit.

The TMDL states that concentration-based WLAs are established for the minor NPDES permits that discharge to the Los Cerritos Channel to ensure that these point sources do not contribute to exceedances of the CTR limits. The concentration-based WLA for dry weather is equal to the dry-weather numeric target of 19.1 µg/L for copper expressed as total recoverable metals. The TMDL also establishes wet-weather WLAs, which apply to any day when the maximum daily flow measured at the Stearns Street monitoring station located within the Los Cerritos Channel above the tidal prism is equal to or greater than 23 cubic feet per second (cfs). The concentration-based WLAs for wet weather are equal to the wet-weather numeric targets of 9.8 µg/L and 95.6 µg/L for copper and zinc expressed as total recoverable metals, respectively. The TMDL states, *“For lead, where existing loads (based on the observed average concentration of 55.8 µg/L), are less than the loading capacity (based on the translated CTR total load concentration of 213.2 µg/L), the TMDL and allocations are set at the existing load level.”* Therefore, as the TMDL presents in Table 6-2, the concentration-based wet-weather WLA for lead is 55.8 µg/L expressed as total recoverable metal. This Order establishes a dry-weather effluent limitation for copper and wet-weather effluent limitations for copper, lead, and zinc based on the Los Cerritos Channel TMDL for Metals.

2. **Implementation Plan for Total Maximum Daily Loads for Metals in the Los Cerritos Channel.** The Regional Water Board adopted an Implementation Plan for the Los Cerritos Channel Metals TMDL on June 6, 2013 (Resolution No. R13-004). The State Water Board approved the Implementation Plan by Resolution No. 2014-0012, on March 4, 2014. The Plan became effective with the approval of the Office of Administrative Law (OAL) on October 13, 2014.

The Implementation Plan provides guidance to permit writers for translating concentration-based WLAs into permit limitations:

*“Permit writers may translate applicable waste load allocations into daily maximum and monthly average effluent limitations for the minor NPDES permits by applying effluent limitations derivation procedures in Section 1.4 of the State Water Board’s Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California or other appropriate methodologies, subject to Executive Officer approval.”*

The Implementation Plan does not provide for an extended compliance period for minor individual dischargers.

#### **IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include Water Quality-Based Effluent Limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

##### **A. Discharge Prohibitions**

Discharge Prohibitions in this Order are based on the Federal Clean Water Act, Basin Plan, Water Code, State Water Board's plans and policies, U.S. EPA guidance and regulations, and



previous permit provision, and are consistent with the requirements set for other discharges to the Los Cerritos Channel that are regulated by NPDES permits. The Discharge prohibitions are listed in Section III, Discharge Prohibitions, of the Order.

## **B. Technology-Based Effluent Limitations**

### **1. Scope and Authority**

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with section 125.3.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

- a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.
- b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.
- d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. section 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Regional Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

### **2. Applicable Technology-Based Effluent Limitations (TBELs)**

When the Facility was operating as a petroleum refinery, it was categorized as a topping refinery as defined in 40 CFR section 419.10 (Effluent Limitation Guidelines and Standards for the Petroleum Refining Point Source Category). Effluent limitations guidelines have not been established for the Facility's current operation as a renewable fuels refinery. However, the Facility still retains the capability to return to petroleum refining in the future and stores crude oil on-site. In addition, the renewable fuels refining employs similar processes and materials and products stored on-site are similar to those

for petroleum refining. Therefore, TBELs based on 40 CFR section 419.10 established in the Order R4-2011-0050 are included for discharges which occur when the facility is operating as a petroleum refinery. In addition, if the Facility does return to petroleum refining, they must notify the Regional Water Board at least 90 days before commencing such operations.

a. **Technology-based Effluent Limitations (TBELs) Applicable at Discharge Point 001 During Petroleum Refinery Operations**

Because the discharge through Discharge Point 001 consists of contaminated runoff, effluent limitation guidelines (ELGs) for contaminated runoff established in sections 419.12, 419.13, and 419.14 are applicable to the discharge. Sections 419.12, 419.13, and 419.14 establish effluent limitations of 15 mg/L for oil and grease and 110 mg/L for Total Organic Carbon (TOC) for contaminated runoff. When the discharge exceeds the effluent limitation for oil and grease or TOC specified above, then effluent limitations for BOD, chromium, chromium (VI), COD, oil and grease, pH, phenolic compounds, and TSS are applicable. Because there were no discharges during the term of the existing Order, there is insufficient effluent data to confirm that the effluent will consistently be under the trigger concentrations of 15 mg/L for oil and grease and 110 mg/L for TOC. Therefore, technology-based effluent limitations for chromium, COD, oil and grease, pH, and TSS are established in this Order.

The existing permit contains effluent limitations of 30 mg/L for BOD, 15 mg/L for oil and grease, 110 µg/L for TOC, 1 µg/L for phenolic compounds and 15 µg/L for hexavalent chromium. The units for TOC in Order R4-2011-0050 (µg/L) was a typographical error that has been changed to “mg/L” in this Order.

In this Order the mass-based limitations for BOD, TSS, COD, oil and grease, phenolic compounds, total chromium, and chromium (VI) the pollutants with ELGs, are the most stringent of the BPT, BAT, and BCT limitations as illustrated in the following table.

**Table F-4. Comparison of ELGs for Contaminated Runoff**

Parameter	Effluent Limit in 40 CFR 419 B <sup>1</sup>						Most Stringent ELG		ELG Basis
	BPT 419.22		BAT 419.23		BCT 419.24		Daily Max	30-day Avg.	
	Daily Max	30-day Avg.	Daily Max	30-day Avg.	Daily Max	30-day Avg.			
	(lbs/kbbl)	(lbs/kbbl)	(lbs/kbbl)	(lbs/kbbl)	(lbs/kbbl)	(lbs/kbbl)	(lbs/day)	(lbs/day)	
BOD	0.40	0.22	--	--	0.40	0.22	0.40	0.22	BPT/BCT
TSS	0.28	0.18	--	--	0.28	0.18	0.28	0.18	BPT/BCT
COD	3.0	1.5	3.0	1.5	--	--	3.0	1.5	BPT/BAT
Oil and Grease	0.13	0.067	--	--	0.13	0.067	0.13	0.067	BPT/BCT
Phenolic Compounds	0.0029	0.0014	0.0029	0.0014	--	--	0.0029	0.0014	BPT/BAT
Total Chromium	0.0060	0.0035	0.0050	0.0018	--	--	0.0050	0.0018	BAT
Hexavalent Chromium	0.00052	0.00023	0.00052	0.00023	--	--	0.00052	0.00023	BPT/BAT
pH	The pH of the wastes discharged shall at all times be within the range of 6.0 to 9.0 pH units						6.0 – 9.0		BPT/BCT

1. 40 C.F.R. part 419, subpart B—Topping Category (sections 419.12(a), 419.13(a), and 419.14(a)).

Mass loading limits are calculated based on ELG mass loading factors and the permitted discharge flow of 0.144 MGD; equivalent concentration-based limits are then calculated based on the mass loading limitations and the permitted discharge flow of 0.144 MGD.

**b. Example of Mass-based ELG calculation for COD**

For COD, the ELGs establish a daily maximum effluent limitation of 3 lbs/1,000 gallons of commingled storm water and process wastewaters and a 30-day average of 1.5 lbs/1,000 gallons of commingled storm water and process wastewaters.

The following formula was used to calculate the mass-based limitations for COD:

$$\text{Mass-based (lbs/day)} = (\text{Flow in gpd}/1,000 \text{ gallons}) \times \text{ELG Effluent Limitation}$$

$$\text{Flow} = 144,000 \text{ gallons}$$

$$\text{ELG Effluent Limitation (Daily Max)} = 3.0 \text{ lbs}/1,000 \text{ gallons}$$

$$\text{ELG Effluent Limitation (30-day Average)} = 1.5 \text{ lbs}/1,000 \text{ gallons}$$

Daily Maximum:

$$\text{lbs/day} = (144,000/1,000) \times 3.0 = 432$$

30-Day Average:

$$\text{lbs/day} = (144,000/1,000) \times 1.5 = 216$$

Pursuant to 40 CFR section 122.45(f)(2), pollutants limited in terms of mass may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations. Concentration-based effluent limitations were calculated from the ELG derived mass-based limitations using the following formula:

Concentration-based (mg/L) = (ELG Effluent Limitation in lbs/1000 gallons) ÷ 0.00834  
where 0.00834 is conversion factor

Daily Maximum:

$$\text{mg/L} = 3.0 \div 0.00834 = 360 \text{ mg/L}$$

30-Day Average:

$$\text{mg/L} = 1.5 \div 0.00834 = 180 \text{ mg/L}$$

This Order retains the technology-based maximum daily effluent limitations for BOD, chromium(VI), mercury, phenolic compounds and TPH as included in Order No. R4-2011-0050 that are based on BPJ in accordance with section 125.3. The existing BPJ-based maximum daily effluent limitations are retained as they are more stringent than effluent limitations based on the applicable ELGs. This action is consistent with Section 402(o) of the CWA and 40 C.F.R. section 122.44(l) which requires that effluent limitations or conditions in reissued Orders be at least as stringent as those in the existing Orders.

Technology-based effluent limitations for benzene, ethylbenzene, toluene, and xylene (BTEX) contained in Order No. R4-2011-0050 are removed from this Order. These effluent limitations were developed prior to the development of 2005 SIP and the CTR. The effluent limitations for BTEX components were based on MCLs and

were retained since at least Order No. 99-131. MCLs are not applicable to the discharge from this Facility, as there is no existing MUN or GWR beneficial use for the Los Cerritos Channel. Historical monitoring has yielded no detectable concentrations of BTEX. Since there is no reasonable potential, this action is an allowable exception to the anti-backsliding provisions of CWA Section 402(o), based on the new information, data demonstrating no reasonable potential.

Technology-based effluent limitations for arsenic, cadmium, selenium, and silver contained in the Order No. R4-2011-0050 are also removed from this Order. These effluent limitations were established in Order No. 99-131. Following issuance of Order 99-131 and prior to issuance of Order No. R4-2005-0082, the Facility modified the storm water system by rerouting storm water from the older processing area to the process water treatment system which discharges to the LACSD. The Fact Sheet of Order No. R4-2011-0050 presents a historical data summary of the 2008 effluent monitoring event which shows that these constituents were not detected in the effluent. In addition, effluent monitoring data from the Facility's 2010 effluent monitoring event also show that these constituents were not detected in the effluent. Removal of these technology-based effluent limitations is based on new information from the Facility's 2010 monitoring data which indicate that these pollutants are not present in the discharge at detectable levels, and thus is an allowable exception to the anti-backsliding provisions of CWA Section 402(o)(2).

To ensure that technology-based effluent limitations do not result in exceedances of water quality criteria, TBELs included in Table F-4 are compared to WQBELs described in Table F-6, and the more stringent limits are established in this Order.

In addition, Order No. R4-2011-0050 required the Discharger to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). This Order will require the Discharger to update and continue to implement the SWPPP. The revised SWPPP will reflect current operations, treatment activities, and staff responsible for implementing and supporting the SWPPP. The SWPPP must outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff and trash from being discharged directly into the storm drain. The SWPPP must also outline management practices to eliminate the discharge of trash entrained in storm water discharged from the Facility, which may enter the receiving water.

This Order also requires that the Discharger to develop and implement a Best Management Practices Plan (BMPP). The BMPP shall include a summary of BMPs aimed at controlling the potential exposure of pollutants to storm water, inspection practices, schedules of preventive maintenance, housekeeping procedures, vehicle management practices, and spill containment and cleanup procedures. The BMPP should demonstrate the Discharger's continued effective implementation of the SWPPP. This Order will also require the Discharger to update and continue to implement their Spill Prevention Control and Countermeasure (SPCC) Plan.

The combination of the SWPPP, BMPP, SPCC Plan, and effluent limitations based on the past ELGs past performance, and reflecting BPJ, are established in this Order , in order to carry out the purposes and intent of the CWA.

**Table F-5. Summary of Technology-based Effluent Limitations Petroleum Refinery Operations at Discharge Point 001**

Parameter	Units	Effluent Limitation	
		Average Monthly	Maximum Daily
pH	standard units	Between 6.0 and 9.0 <sup>1</sup>	
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	26 <sup>2</sup>	30 <sup>3</sup>
	lbs/day	32 <sup>2</sup>	36 <sup>3, 4</sup>
Chromium, Total Recoverable	µg/L <sup>2</sup>	216	600
	lbs/day <sup>2</sup>	0.26	0.72
Chromium (VI)	µg/L	--	15 <sup>5</sup>
	lbs/day <sup>4</sup>	--	0.02 <sup>5</sup>
Chemical Oxygen Demand (COD)	mg/L <sup>2</sup>	180	360
	lbs/day <sup>2</sup>	216	432
Mercury, Total Recoverable	µg/L	--	2
	lbs/day <sup>4</sup>	--	0.0024
Oil and Grease	mg/L	8.0 <sup>2</sup>	15 <sup>3</sup>
	lbs/day	10 <sup>2</sup>	18 <sup>3, 4</sup>
Phenolic Compounds <sup>6</sup>	µg/L	--	1 <sup>5</sup>
	lbs/day <sup>4</sup>	--	0.0012 <sup>5</sup>
Total Organic Carbon (TOC)	mg/L	--	110
	lbs/day <sup>4</sup>	--	132
Total Petroleum Hydrocarbons (TPH) <sup>7</sup>	µg/L	--	100
	lbs/day <sup>4</sup>	--	0.12
Total Suspended Solids (TSS)	mg/L <sup>2</sup>	22	34
	lbs/day <sup>2</sup>	26	40

**Table F-6. Summary of Technology-based Effluent Limitations Biofuel Refinery Operations at Discharge Point 001**

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
<b>Conventional Pollutants</b>					
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	--	30	--	--
	lbs/day <sup>4</sup>	--	36	--	--
Oil and Grease	mg/L	--	15	--	--
	lbs/day <sup>4</sup>	--	18	--	--
pH	standard units	--	--	6.5 <sup>1</sup>	8.5 <sup>1</sup>
Total Suspended Solids (TSS)	mg/L	--	75	--	--
	lbs/day <sup>4</sup>	--	90	--	--
Total Petroleum Hydrocarbons (TPH) <sup>7</sup>	µg/L	--	100	--	--
	lbs/day <sup>4</sup>	--	0.12	--	--

1. The pH limit for petroleum refinery is based on the ELGs from 40 C.F.R. part 419, subpart B Topping category. The effluent limitation for pH for biofuel refinery operations is based on the Basin Plan (between 6.5 to 8.5) the limit is more stringent than that in the ELGs.
2. The mass-based effluent limitations are calculated based on mass loading factors contained in 40 CFR section 419 and a maximum design flow of 0.144 MGD. The equivalent concentration-based effluent limitations are calculated based on the mass loading limits and a maximum design flow of 0.144 MGD, as follows:  $\text{Mass (lbs/day)} / [\text{Flow (MD)} \times 8.34 \text{ (conversion factor)}] = \text{mg/L}$ . For reporting, the actual mass for a pollutant shall be calculated based on the actual measured flow of the discharge.
3. The maximum daily effluent limitation for BOD and oil and grease in Order R4-2011-0050 is more stringent than the calculated daily maximum limitation based on ELGs; therefore the existing limitation is retained in this Order to adhere to backsliding requirements.
4. The mass-based effluent limitations are based on a maximum design flow of 0.144 MGD and are calculated as follows:  $\text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34 \text{ (conversion factor)} = \text{lbs/day}$ . For reporting, the actual mass for a pollutant shall be calculated based on the actual measured flow of the discharge.
5. The existing limitations in Order R4-2011-0050 are more stringent than the ELG calculated limitations. Therefore, the limits from the existing Order are included here.
6. Phenolic compounds include the sum of the following individual chlorinated and non-chlorinated phenolic compounds: 2-chlorophenol; 2-nitrophenol; phenol; 2,4-dimethylphenol; 2,4-dichlorophenol; 2,4,6-trichlorophenol; 4-chloro-3-methylphenol; 2,4-dinitrophenol; 2-methyl-4,6-dinitrophenol; pentachlorophenol; and 4-nitrophenol.
7. TPH equals the sum of TPH gasoline (C<sup>4</sup>-C<sup>12</sup>), TPH diesel (C<sup>13</sup>-C<sup>12</sup>), and TPH oil (C<sup>23+</sup>)

### C. Water Quality-Based Effluent Limitations (WQBELs)

#### 1. Scope and Authority

CWA Section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 C.F.R. requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi). WQBELs must also be consistent with the assumptions and requirements of TMDL WLAs approved by U.S. EPA.

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

The specific procedures for determining reasonable potential for discharges from the Facility, and if necessary for calculating WQBELs, are contained in the U.S. EPA Technical Support Document for Water Quality-Based Toxics Control (TSD) for storm water discharges and in the SIP for non-storm water discharges. The TSD in section 3.3.8 in the paragraph on page 64 states: "*The statistical approach shown in Box 3-2 or an analogous approach developed by a regulatory authority can be used to determine*

*the reasonable potential.*” The Regional Water Board has determined the procedures for determining reasonable potential and calculating WQBELs contained in the SIP for non-storm water discharges may be used to evaluate reasonable potential and calculate WQBELs for storm water discharges as well. Hence, for this Order, the Regional Water Board has used the SIP methodology to evaluate reasonable potential for discharges through Discharge Point 001.

**2. Applicable Beneficial Uses and Water Quality Criteria and Objectives**

As noted in section II of the Limitations and Discharge Requirements, the Regional Water Board adopted a Basin Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The beneficial uses applicable to the receiving water are summarized in section III.C.1 of this Fact Sheet. The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving water.

Priority pollutant water quality criteria in the CTR are applicable to Los Cerritos Channel. The CTR contains both saltwater and freshwater criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, the following apply, in accordance with section 131.38(c)(3), freshwater criteria apply at salinities of 1 part per thousand (ppt) and below at locations where this occurs 95 percent or more of the time. The CTR criteria for freshwater, or human health for consumption of organisms, whichever is more stringent, are used to prescribe the effluent limitations to protect the beneficial uses of the Los Cerritos Channel a water of the U.S.

The table below summarizes the applicable water quality criteria/objective for priority pollutants reported in detectable concentrations in the effluent or receiving water. These criteria were used to complete the RPA for this Order.

**Table F-7. Applicable Water Quality Criteria**

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria					
			Freshwater		Saltwater		Human Health for Consumption of:	
			Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms only
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
5b	Chromium (VI)	11	16	11	N/A	N/A	Narrative	
6	Copper, Dry-Weather	31.4 <sup>1</sup>	9.8	--			--	
6	Copper, Wet-Weather	9.8 <sup>1</sup>	9.8	--			--	
7	Lead, Wet-Weather	55.8 <sup>1</sup>	55.8	--			Narrative	
8	Mercury	0.051	Reserved	Reserved			0.051	
13	Zinc, Dry-Weather	188 <sup>2</sup>	188	188			--	
13	Zinc, Wet-Weather	95.6 <sup>1</sup>	95.6	--			--	
16	TCDD-Equivalents	1.4x10 <sup>-8</sup>	--	--			1.4x10 <sup>-8</sup>	
19	Benzene	71	--	--			71	
33	Ethylbenzene	29000	--	--			29000	

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria					
			Freshwater		Saltwater		Human Health for Consumption of:	
			Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms only
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
39	Toluene	200000	--	--				200000

1. The TMDL dry-weather concentration-based waste load allocation (WLA) for copper (31.4 µg/L) and wet-weather concentration-based WLAs for copper (9.8 µg/L), lead (55.8 µg/L), and zinc (95.6 µg/L) were used as the criteria.
2. The dry-weather zinc criteria is based on median hardness of 170 mg/L CaCO<sub>3</sub> measured during dry-weather conditions in the Los Cerritos Channel, as reported in the Los Cerritos Channel TMDL.

**3. Determining the Need for WQBELs**

**a. Reasonable Potential Analysis Methodology**

In accordance with Section 1.3 of the SIP, the Regional Water Board conducts a Reasonable Potential Analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. If there is a TMDL WLA approved by U.S. EPA, then WQBELs are developed using the WLA. Otherwise, the Regional Water Board analyzes effluent and receiving water data and identifies the maximum observed effluent concentration (MEC) and maximum background concentration (B) in the receiving water for each constituent. To determine reasonable potential, the MEC and the B are then compared with the applicable water quality objectives (C) outlined in the CTR, NTR, as well as the Basin Plan. For all pollutants that have a reasonable potential to cause or contribute to an excursion above a state water quality standard, numeric WQBELs are required. The RPA considers water quality criteria from the CTR and NTR, and when applicable, water quality objectives specified in the Basin Plan. To conduct the RPA, the Regional Water Board identifies the MEC and maximum background concentration in the receiving water for each constituent, based on data provided by the Discharger.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete a RPA:

- i. Trigger 1 – if  $MEC \geq C$ , a limit is needed.
- ii. Trigger 2 – If the background concentration  $B > C$  and the pollutant is detected in the effluent, a limit is needed.
- iii. Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, or other applicable factors indicate that a WQBEL is required.

Sufficient effluent and receiving water data are needed to conduct a complete RPA. If data are not sufficient, the Discharger will be required to gather the appropriate data for the Regional Water Board to conduct the RPA. Upon review of the data, and if the Regional Water Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.



**b. Reasonable Potential Analysis Results**

No effluent monitoring data were available during the term of Order No. R4-2011-0050. For this Order, monitoring data collected from discharge events on January 25, 2008 and December 20, 2010 were used to conduct the RPA.

In addition, the Regional Water Board developed WQBELs for copper, lead, and zinc that have specified WLAs in the Los Cerritos Channel TMDL. The effluent limitations for these pollutants were established regardless of whether or not there is reasonable potential for the pollutants to be present in the discharge at levels that would cause or contribute to a violation of water quality standards. The Regional Water Board developed WQBELs for these pollutants pursuant to 40 C.F.R. section 122.44(d)(1)(vii), which does not require or contemplate an RPA. Similarly, the SIP at section 1.3 recognizes that an RPA is not appropriate if a TMDL has been developed.

The following table summarizes results from the RPA.

**Table F-8. Summary of Reasonable Potential Analysis**

CTR No.	Constituent	Applicable Water Quality Criteria (µg/L)	Maximum Effluent Concentration (µg/L)	Maximum Detected Receiving Water Concentration (µg/L)	RPA Result – Need Limitation?	Reason
5b	Chromium (VI)	11	<0.2	N/A <sup>2</sup>	No	No RP <sup>5</sup>
6	Copper, Dry-Weather	31.4 <sup>1</sup>	<0.3	N/A <sup>2</sup>	Yes	TMDL
6	Copper, Wet-Weather	9.8 <sup>1</sup>	<0.3	N/A <sup>2</sup>	Yes	TMDL
7	Lead, Wet-Weather	55.8 <sup>1</sup>	<5.0	N/A <sup>2</sup>	Yes	TMDL
8	Mercury	0.051	<0.5	N/A <sup>2</sup>	Yes	More stringent than TBEL
13	Zinc, Dry-Weather	188	458	N/A <sup>2</sup>	Yes	MEC ≥ C
13	Zinc, Wet-Weather	95.6 <sup>1</sup>	27	N/A <sup>2</sup>	Yes	TMDL
--	TCDD Equivalents	1.40 x 10 <sup>-8</sup>	5.17 x 10 <sup>-6</sup>	N/A <sup>2</sup>	No	<sup>3</sup>
19	Benzene	71	<1 <sup>4</sup>	N/A <sup>2</sup>	No	MEC < C
33	Ethylbenzene	29000	<1 <sup>4</sup>	N/A <sup>2</sup>	No	MEC < C
39	Toluene	200000	<1 <sup>4</sup>	N/A <sup>2</sup>	No	MEC < C

ND= not detected

- The TMDL dry-weather concentration-based waste load allocation (WLA) for copper (31.4 µg/L) and wet-weather concentration-based WLAs for copper (9.8 µg/L), lead (55.8 µg/L), and zinc (95.6 µg/L) were used as the criteria.
- Receiving water concentration data was not available.

3. All of the detected congeners had DNQ qualifiers; therefore, rather than establish numerical limitations in this Order, monitoring and reporting requirements are established to collect data for future reasonable potential analysis.
4. Pollutant was not detected in effluent; pollutant was included in the RPA to obtain the applicable water quality based limits which is compared with the technology-based limits contained in Order No. R4-2011-0050.
5. The existing limit for Chromium VI of 15 µg/L is more stringent than the applicable ELGs for petroleum refinery operations and the WQBEL calculated from SIP methods and CTR criteria(16 µg/L). The existing limit is retained to adhere to anti-backsliding requirements for petroleum refinery operations. There is no reasonable potential for Chromium VI in storm water discharges associated with biofuel refinery operations. Hence, no effluent limit for Chromium VI is included in the storm water discharges during biofuel refinery operations.

#### 4. WQBEL Calculations

- a. If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one or more of the three procedures contained in section 1.4 of the SIP. These procedures include:
  1. If applicable and available, use the WLA established as part of a TMDL.
  2. Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).
  3. Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Regional Water Board.
    - i. The *Los Cerritos Channel TMDL for Metals* establishes WLAs for copper (dry and wet weather), lead (wet weather) and zinc (wet weather); WQBELs for these constituents are calculated following the procedures in section 1.4 of the SIP.
    - ii. Since many of the streams in the Region have minimal upstream flows, mixing zones and dilution credits are usually not appropriate. Therefore, in this proposed Order, no dilution credit is being allowed. However, in accordance with the reopener provision in Section VI.C.1.e in the proposed Order, this Order may be reopened upon the submission by the Discharger of adequate information to establish appropriate dilution credits or a mixing zone, as determined by the Regional Water Board.
    - iii. WQBELs Calculation Example

Using copper as an example, the following demonstrates how WQBELs were established for this Order. The tables in Attachments J summarize the development and calculation of all WQBELs for this Order using the process described below.

##### *Calculation of aquatic life AMEL and MDEL:*

**Step 1:** For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective. For each criterion, determine the effluent concentration allowance (ECA) using the following steady state equation:

$$ECA = C + D(C-B) \quad \text{when } C > B, \text{ and}$$

$$ECA = C \quad \text{when } C \leq B,$$

Where  $C =$  The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. In this Order, a hardness

value of 27 mg/L (as CaCO<sub>3</sub>) was used for development of hardness-dependent criteria. This value was used in development of the Los Cerritos Channel Metals TMDL and in the previous Order. A pH of 6.50 was used for pH-dependent criteria. This is the Basin Plan objective for minimum pH and represents the critical condition for pH dependent criteria.

- D = The dilution credit, and
- B = The ambient background concentration

As discussed above, at this time this Order does not allow dilution; therefore

$$ECA = C$$

For parameters with applicable TMDLs expressed as concentration-based WLAs, the WLA was used as the ECA for the calculations of the WQBELs.

For total recoverable copper, the applicable water quality criteria are:

$$ECA_{acute} = 9.8 \mu\text{g/L (TMDL wet weather WLA)}$$

$$ECA_{chronic} = 19.1 \mu\text{g/L (TMDL dry weather WLA)}$$

**Step 2:** For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. The wet weather WLAs in the Los Cerritos Channel TMDL were based on acute criteria, therefore, only the acute multipliers are applicable. The dry weather WLA for copper was based on chronic criteria, therefore, only the chronic multiplier is applicable. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 3 of the SIP and will not be repeated here.

$$LTA_{acute} = ECA_{acute} \times \text{Multiplier}_{acute99}$$

$$LTA_{chronic} = ECA_{chronic} \times \text{Multiplier}_{chronic99}$$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6. If the data set is greater than 10 samples, and at least 20% of the samples in the data set are reported as detected, the CV shall be equal to the standard deviation of the data set divided by the average of the data set.

For total recoverable copper, the following data were used to develop the acute and chronic LTAs using equations provided in section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals):

No. of Samples	CV	ECA Multiplier <sub>acute</sub>	ECA Multiplier <sub>chronic</sub>
0	0.6	0.321	0.53

$$LTA_{acute} = 9.8 \mu\text{g/L} \times 0.321 = 3.15 \mu\text{g/L}$$

$$LTA_{chronic} = 19.1 \mu\text{g/L} \times 0.53 = 10.1 \mu\text{g/L}$$

**Step 3:** Select the most limiting (lowest) of the LTA.

$$LTA = \text{most limiting of } LTA_{\text{acute}} \text{ or } LTA_{\text{chronic}}$$

Or, for total recoverable copper, which has both dry and wet weather WLAs, both LTAs are used to calculate two sets of limits:

$$LTA_{\text{wet weather}} = LTA_{\text{acute}}$$

$$LTA_{\text{dry weather}} = LTA_{\text{chronic}}$$

Thus, for total recoverable copper, the wet-weather and dry-weather LTAs are:

$$LTA_{\text{copper, wet weather}} = LTA_{\text{acute}} = 3.15 \mu\text{g/L}$$

$$LTA_{\text{copper, dry weather}} = LTA_{\text{chronic}} = 10.1 \mu\text{g/L}$$

**Step 4:** Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as AMEL and MDEL. The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the CV of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 5 of the SIP and will not be repeated here.

$$AMEL_{\text{aquatic life}} = LTA \times AMEL_{\text{multiplier95}}$$

$$MDEL_{\text{aquatic life}} = LTA \times MDEL_{\text{multiplier99}}$$

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples per month is less than four (4), the default number of samples to be used is four (4).

For total recoverable copper, the following data were used to develop the AMEL and MDEL using equations provided in section 1.4, Step 5 of the SIP (Table 2 of the SIP also provides this data up to two decimals):

No. of Samples Per Month	CV	Multiplier <sub>MDEL99</sub>	Multiplier <sub>AMEL95</sub>
4	0.6	3.11	NA

Calculation of human health AMEL and MDEL

$$AMEL_{\text{Human Health}} = \text{Not applicable}$$

$$MDEL_{\text{wet weather}} = 3.15 \mu\text{g/L} \times 3.11 = 9.8 \mu\text{g/L}$$

$$MDEL_{\text{dry weather}} = 10.1 \mu\text{g/L} \times 3.11 = 31.4 \mu\text{g/L}$$

TMDLs are applicable for copper, lead, and zinc; therefore, the MDEL is based on WLAs established to achieve the criteria specified in the TMDL. Consistent with the assumptions of the Los Cerritos Channel TMDL for Metals, separate WQBELs are applicable for copper during wet-weather and dry-weather events, while for lead and zinc WQBELs are only applicable to the Facility during wet-weather events.

Total recoverable copper

**Step 5:** For the ECA based on human health, set the AMEL equal to the  $ECA_{\text{human health}}$ :

$$AMEL_{\text{human health}} = ECA_{\text{human health}}$$

For copper, this is not necessary since the WLAs were based on a TMDL. Therefore, AMELs based on human health criteria for copper are not appropriate.

**Step 6:** Calculate the MDEL for human health by multiplying the AMEL by the ratio of  $\text{Multiplier}_{\text{MDEL}}$  to the  $\text{Multiplier}_{\text{AMEL}}$ . Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

$$MDEL_{\text{human health}} = AMEL_{\text{human health}} \times (\text{Multiplier}_{\text{MDEL}} / \text{Multiplier}_{\text{AMEL}})$$

There were no effluent limitations for copper developed based on human health criteria.

**Step 7:** Select the lower of the AMEL and MDEL based on aquatic life and human health as the WQBEL for the Order. Since there are no human health limitations calculated for copper, the aquatic life limitations apply and since the permit is for storm water only the MDEL is appropriate.

## 5. WQBELs Based on Basin Plan Objectives

Applicable Basin Plan objectives are summarized in the following table:

- a. **pH.** Instantaneous maximum and minimum effluent limitations for pH based on Basin Plan objectives (6.5 – 8.5) are more stringent than pH limitations based on applicable ELGs (6.0 – 9.0; see Section IV.B of the Fact Sheet). This Order establishes the more stringent limitations based on Basin Plan objectives.
- b. **Bacteria.** The Los Cerritos Channel was identified on the 2012 303(d) list as impaired for coliform bacteria. To address bacteria as a pollutant of concern, this Order includes receiving water monitoring for *E. coli* based on the Basin Plan Objectives and requires bacteria monitoring in the effluent and the receiving water.
- c. **Dissolved Oxygen.** The discharge shall not depress the concentration of dissolved oxygen to fall below 5.0 mg/L anytime, and the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation. This Order addresses dissolved oxygen through receiving water monitoring.
- d. **Temperature.** The Basin Plan lists temperature requirements for the receiving waters. Based on a white paper developed by Regional Water Board staff titled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*, a maximum effluent temperature limitation of 86°F was determined to be appropriate for protection of aquatic life and is included in the permit. The white paper evaluated the optimum temperatures for aquatic species routinely available in surface water bodies within the Los Angeles Region including: steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. This Order addresses the water quality objective for temperature by establishing effluent limitations based on the Thermal Plan and the White Paper.

## 6. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “no toxics in toxic amounts” criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses by aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota.

Order No. R4-2011-0050 included acute toxicity limitations in accordance with the Basin Plan. During the most recent effluent monitoring events in 2008 and 2010 the effluent acute toxicity results were in compliance with the specified limitations.

Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects. Because discharge from the Facility may include a number of chemicals, which individually may not be present in toxic concentrations while exhibiting aggregated toxic effects as a whole, this Order prescribes a chronic toxicity effluent limitation and requires chronic toxicity monitoring for the effluent at Discharge Point 001. The WET testing requirements in this Order are based on U.S. EPA’s 2010 Test of Significant Toxicity (TST) statistical approach in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) as an improved statistical tool to evaluate data from U.S. EPA’s toxicity test methods. The TST statistical approach more reliably identifies toxicity—in relation to the chronic (0.25 or more) and acute (0.20 or more) mean responses of regulatory management concern—than the current NOEC hypothesis-testing approach. TST results are also more transparent than the point estimate model approach used for acute toxicity that is not designed to address the question of statistical uncertainty around the modeled toxicity test result in relation to the effect level of concern. The TST statistical approach is the superior approach for addressing statistical uncertainty when used in combination with U.S. EPA’s toxicity test methods and is implemented in federal permits issued by U.S. EPA Region 9.

The TST’s null hypothesis for chronic toxicity is:

H0: Mean response (In-stream Waste Concentration (IWC) in % effluent)  $\leq$  0.75 mean response (Control).

Results obtained from a single-concentration chronic toxicity test are analyzed using the TST statistical approach and an acceptable level of chronic toxicity is demonstrated by rejecting the null hypothesis and reporting “Pass” or “P”. Chronic toxicity results are expressed as “Pass” or “Fail” and “% effect”.

The chronic toxicity IWC for Discharge Point 001 is  $100/(0+1) = 100$  percent effluent.

The Maximum Daily Effluent Limitation (MDEL) for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST statistical approach, results in “Fail” and the “Percent Effect” is  $\geq 0.50$ .

The Regional Water Board has determined that chronic toxicity demonstrates reasonable potential based on Step 7 of the RPA procedure described in the SIP which states that other information may be considered to determine whether a WQBEL is needed. Such information includes, among other aspects, the facility type, the discharge type, and the potential toxic impacts of the discharge. Because the types of fuels and chemicals stored at the Facility, it has the potential to discharge a number of pollutants (e.g., TPH, phenolic compounds, TSS), which may cause chronic toxicity in the receiving water. Therefore, a chronic toxicity effluent limitation is included in this Order.

**7. Final WQBELs**

Final WQBELs for each parameter are summarized in the following table.

**Table F-9. Summary of Final WQBELs at Discharge Points 001**

Parameter	Units	Effluent Limitations		
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	6.5	8.5
Temperature	°F	--	--	86
Chromium (VI)	µg/L	15 <sup>1</sup>	--	--
	lbs/day <sup>2</sup>	0.02	--	--
Chronic Toxicity	Pass or Fail, % Effect	--	Pass or % Effect <50 <sup>3</sup>	--
Copper, Total Recoverable (Dry Weather)	µg/L	31	--	--
	lbs/day <sup>2</sup>	0.04	--	--
Copper, Total Recoverable (Wet Weather)	µg/L	9.8	--	--
	lbs/day <sup>2</sup>	0.01	--	--
Lead, Total Recoverable (Wet Weather)	µg/L	56	--	--
	lbs/day <sup>2</sup>	0.07	--	--
Mercury, Total Recoverable	µg/L	0.1	--	--
	lbs/day <sup>2</sup>	0.0001	--	--
Zinc, Total Recoverable (Dry Weather)	µg/L	188	--	--
	lbs/day <sup>2</sup>	0.23	--	--
Zinc, Total Recoverable (Wet Weather)	µg/L	96	--	--
	lbs/day <sup>2</sup>	0.12	--	--

1. The existing limit for Chromium VI of 15 µg/L is more stringent than the applicable ELGs for petroleum refinery operations and the WQBEL calculated from SIP methods and CTR criteria (16 µg/L). The existing limit is retained to adhere to anti-backsliding requirements for petroleum refinery operations. There is no reasonable potential for Chromium VI in storm water discharges associated with biofuel refinery operations. Hence, no effluent limit for Chromium VI is included for the storm water discharges during biofuel refinery operations.
2. Mass loading limitations are based on a maximum flow of 0.144 MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.
3. The Maximum Daily Effluent Limitation (MDEL) is exceeded when a toxicity test results in a "fail," and the percent effect is greater than or equal to 0.50.

#### **D. Final Effluent Limitation Considerations**

This Order retains technology-based effluent limitations for BOD, chromium (VI), oil and grease, phenolic compounds, TOC, and TPH from the existing Order. New technology-based effluent limitations for BOD (average monthly), oil and grease (average monthly), total chromium and COD and more stringent technology-based effluent limitations for TSS are established in this Order. The mass loading limits for these pollutants are calculated based on ELGs and a permitted discharge flow of 0.144 MGD.

Technology-based effluent limitations for arsenic, benzene, cadmium, ethylbenzene, selenium, silver, toluene and xylene contained in Order No. R4-2011-0050 are removed from this Order. This Order retains WQBELs from Order No. R4-2011-0050 for pH, temperature, wet-weather copper, wet-weather lead, and wet-weather zinc. New dry-weather copper, mercury, and dry-weather zinc WQBELs are established in this Order. The effluent limitation for mercury was calculated using CTR criteria and SIP procedures and is more stringent than the limitation in Order R4-2011-0050. Mass loading limits are calculated based on the concentration limits and a permitted discharge flow of 0.144 MGD.

The effluent limitation for acute toxicity contained in Order R4-2011-0050 has been discontinued as the more stringent chronic toxicity limitation is established in this Order and it is protective of acute toxicity.

##### **1. Anti-Backsliding Requirements**

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. This permit retains all effluent limitations established in Order R4-2011-0050, with the exception of arsenic, benzene, cadmium, ethylbenzene, selenium, silver, toluene, xylene, and acute toxicity.

The effluent limitations for TOC in Order R4-2011-0050 were expressed as µg/L. This was a typographical error, as the effluent limitations in the previous Order No. R4-2005-0082 and the ELGs, are expressed in mg/L. This Order includes units of "mg/L" for TOC. Consistent with CWA section 402(o)(2), which states that relaxation is allowed when technical mistakes or mistaken interpretations of the law were made in issuing the permit under CWA section 402(a)(1)(B).

The effluent limitations for benzene, toluene, ethylbenzene and xylene (BTEX) were developed prior to the 2005 SIP and prior to the CTR. The effluent limitations for BTEX components were based on MCLs and have been carried forward since Order No. 99-131. The MCLs are not applicable to the discharge from this Facility, as there is no existing MUN or GWR beneficial use for the Los Cerritos Channel. BTEX components did not exhibit reasonable potential, based on the effluent data collected in the previous two monitoring events (April 2008 and December 2010). Deleting the effluent limitations for BTEX is consistent with CWA Section 402(o)(2) based on the most recent monitoring data, new information. Monitoring for benzene, toluene, and ethylbenzene is included in this Order as part of the priority pollutant scan. Monitoring for xylenes is included in this Order at a frequency of once per year.

The effluent limitations for arsenic, cadmium, selenium and silver were developed in Order 99-131, when storm water from the old processing area of the site was included in the Discharge. Prior to issuance of Order R4-2005-0082, storm water from the old processing area had been routed to the process wastewater system that discharges to the sanitary sewer. The December 20, 2010 monitoring data, which was not available in



time to be evaluated in Order R4-2011-0050, indicates the constituents were not detected or were detected in concentrations well below the existing effluent limitations. These factors constitute new information that was not available when the limitations were established in Order 99-131, Order R4-2005-0082, and Order R4-2011-0050. As such, the deletion of the effluent limitations for these pollutants (relaxation of the effluent limitations) is consistent with CWA Section 402(o)(2).

The facility has recently begun refining biofuels. The storm water discharged during the refining of biofuels is not subjected to federal ELGs. However, water quality based effluent limitations have been developed to regulate the storm water discharges that occur during biofuel refining operations.

## **2. Antidegradation Policies**

40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16. Resolution 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan and the SIP implement, and incorporate by reference, both the State and federal antidegradation policies. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge.

The relaxed effluent limitations for TOC, due to the correction of units, will not result in degradation of the receiving water. The Facility's annual report includes an effluent TOC concentration at 3 mg/L, well below the effluent limitation of 110 mg/L included in this Order. The level of treatment will not be decreased, as the Discharger must also comply with effluent limitations for COD and TPH.

The removal of effluent limitations for arsenic, cadmium, selenium, silver, and BTEX parameters will not result in degradation. As discussed in the Fact Sheet section IV.D.1 of this Order, these constituents were not detected in the Facility's 2010 Annual Report. The Facility's existing treatment system is not specifically designed for the removal of metals and the level of treatment will not be changed as a result of their removal. In addition the limitations for TPH will ensure that there are no increases in the discharge of BTEX parameters.

This permit also includes new effluent limitations for discharges of storm water associated with biofuel refining operations. The permitted flow and the water quality based effluent limitations are implemented to protect the beneficial uses of the receiving water during biofuel refining are consistent with those used to regulate storm water flows from petroleum refinery operations.

This Order does not provide for an increase in the permitted design flow or allow for a reduction in the level of treatment. The final limitations in this Order hold the discharger to performance levels that will not cause or contribute to water quality impairment or degradation of water quality. Therefore, the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution 68-16.

## **3. Stringency of Requirements for Individual Pollutants**

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD, chromium, chromium (VI), COD, oil and grease, phenolic compounds, TPH, and TSS. Restrictions on these pollutants are discussed in Section IV.B of the Fact

Sheet. This Order’s technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Technology-based effluent limitations for chromium (VI) were compared to WQBELs and the more stringent technology-based effluent limitations were applied. Water quality-based effluent limitations for copper, lead, mercury, and zinc have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR implemented by the SIP, which was approved by U.S. EPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by U.S. EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless “applicable water quality standards for purposes of the CWA” pursuant to 40 C.F.R. section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order were approved by U.S. EPA and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order’s restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

**4. Mass-based Effluent Limitations**

Mass-based effluent limitations are established using the following formula:

$$\text{Mass (lbs/day)} = \text{flow rate (MGD)} \times 8.34 \times \text{effluent limitation (mg/L)}$$

where: Mass = mass limitation for a pollutant (lbs/day)

Effluent limitation = concentration limit for a pollutant (mg/L)

Flow rate = discharge flow rate (MGD)

Mass-based effluent limits applicable to discharge Point 001 are calculated based on a discharge flow of 0.144 MGD.

**5. Summary of Final Effluent Limitations**

**Table F-10. Summary of Final Effluent Limitations from Petroleum Refinery Operations at Discharge Points 001**

Parameter	Units	Effluent Limitations				Basis <sup>1</sup>
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
BOD	mg/L	26 <sup>2</sup>	30	--	--	E, BPJ, ELG
	lbs/day	32 <sup>2</sup>	36 <sup>3</sup>	--	--	
Oil and Grease	mg/L	8.0 <sup>2</sup>	15	--	--	E, BPJ, ELG
	lbs/day <sup>3</sup>	10 <sup>2</sup>	18 <sup>3</sup>	--	--	
pH	standard units	--	--	6.5	8.5	E, BP
TSS	mg/L <sup>2</sup>	22	34	--	--	E, ELG
	lbs/day <sup>2</sup>	26	40	--	--	
Chronic Toxicity	Pass or Fail, % Effect (TST)	--	Pass or % Effect <50 <sup>4</sup>	--	--	BP

Parameter	Units	Effluent Limitations				Basis <sup>1</sup>
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
COD	mg/L <sup>2</sup>	180	360	--	--	ELG
	lbs/day <sup>2</sup>	216	432	--	--	
Phenolic Compounds <sup>5</sup>	µg/L	--	1	--	--	E, BPJ, ELG
	lbs/day <sup>3</sup>	--	0.001	--	--	
Temperature	°F	--	--	--	86	E, TP, BP
TOC	mg/L	--	110	--	--	E, ELG
	lbs/day <sup>3</sup>	--	132	--	--	
TPH (Total Petroleum Hydrocarbons)	µg/L	--	100	--	--	E, BPJ
	lbs/day <sup>3</sup>	--	0.12	--	--	
Chromium, Total Recoverable	µg/L <sup>2</sup>	216	600	--	--	ELG
	lbs/day <sup>2</sup>	0.26	0.72	--	--	
Chromium (VI)	µg/L	--	15	--	--	E, BPJ, ELG
	lbs/day <sup>3</sup>	--	0.02	--	--	
Copper, Total Recoverable (Dry Weather) <sup>6</sup>	µg/L	--	31.4	--	--	TMDL
	lbs/day <sup>3</sup>	--	0.04	--	--	
Copper, Total Recoverable (Wet Weather) <sup>7</sup>	µg/L	--	9.8	--	--	E, TMDL
	lbs/day <sup>3</sup>	--	0.01	--	--	
Lead, Total Recoverable (Wet Weather) <sup>6</sup>	µg/L	--	56	--	--	E, TMDL
	lbs/day <sup>3</sup>	--	0.07	--	--	
Mercury, Total Recoverable	µg/L	--	0.1	--	--	CTR, SIP
	lbs/day <sup>3</sup>	--	0.0001	--	--	
Zinc, Total Recoverable (Dry Weather) <sup>6</sup>	µg/L	--	188	--	--	CTR, SIP
	lbs/day <sup>3</sup>	--	0.23	--	--	
Zinc, Total Recoverable (Wet Weather) <sup>7</sup>	µg/L	--	96	--	--	E, TMDL
	lbs/day <sup>3</sup>	--	0.12	--	--	

**Table F-11. Effluent Limitations from Biofuel Refinery Operations at Discharge Point 001**

Parameter	Units	Effluent Limitations				Basis
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
<b>Conventional Pollutants</b>						
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	--	30	--	--	BPJ
	lbs/day <sup>3</sup>	--	36	--	--	
Oil and Grease	mg/L	--	15	--	--	BPJ

Parameter	Units	Effluent Limitations				Basis
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
	lbs/day <sup>3</sup>	--	18	--	--	
pH	standard units	--	--	6.5	8.5	BPJ
Total Suspended Solids (TSS)	mg/L	--	75	--	--	BPJ
	lbs/day <sup>3</sup>	--	90	--	--	
<b>Non-Conventional Pollutants</b>						
Chronic Toxicity	Pass or Fail, % Effect (TST)		Pass or % Effect <50 <sup>3</sup>	--	--	BPJ
Temperature	°F	--	--	--	86	BPJ
Total Petroleum Hydrocarbons (TPH) <sup>8</sup>	µg/L	--	100	--	--	BPJ
	lbs/day <sup>3</sup>	--	0.12	--	--	
<b>Priority Pollutants</b>						
Copper, Total Recoverable (Dry Weather) <sup>5</sup>	µg/L	--	31.4	--	--	TMDL
	lbs/day <sup>3</sup>	--	0.038	--	--	
Copper, Total Recoverable (Wet Weather) <sup>6</sup>	µg/L	--	9.8	--	--	E, TMDL
	lbs/day <sup>3</sup>	--	0.012	--	--	
Lead, Total Recoverable (Wet Weather) <sup>6</sup>	µg/L	--	56	--	--	E, TMDL
	lbs/day <sup>3</sup>	--	0.067	--	--	
Mercury, Total Recoverable	µg/L	--	0.1	--	--	CTR, SIP
	lbs/day <sup>3</sup>	--	0.0001	--	--	
Zinc, Total Recoverable (Dry Weather) <sup>5</sup>	µg/L	--	188	--	--	CTR, SIP
	lbs/day <sup>3</sup>	--	0.23	--	--	
Zinc, Total Recoverable (Wet Weather) <sup>6</sup>	µg/L	--	96	--	--	E, TMDL
	lbs/day <sup>3</sup>	--	0.12	--	--	

- 1 E = Existing Order; ELG= Effluent Limitations Guidelines and Standards; BP = Basin Plan; TMDL = Total Maximum Daily Load; CTR = California Toxic Rule; SIP = State Implementation Policy; and WP = White Paper, TP = Thermal Plan.
- 2 Mass loading limitations are calculated based on mass loading factors contained in 40 CFR section 419 and a maximum design flow of 0.144 MGD. Equivalent concentration-based limitations are calculated based on the mass loading limitations and a maximum design flow of 0.144 MGD, as follows: Mass (lbs/day) / [Flow (MGD) x 8.34 (conversion factor)] = mg/L.
- 3 Mass loading limitations are based on a maximum flow of 0.144 MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.
- 4 The Maximum Daily Effluent Limitation (MDEL) is exceeded when a toxicity test results in a "fail," and the percent effect is greater than or equal to 0.50.
- 5 Phenolic compounds include the sum of the following individual chlorinated and non-chlorinated phenolic compounds: 2-chlorophenol; 2-nitrophenol; phenol; 2,4-dimethylphenol; 2,4-dichlorophenol; 2,4,6-

trichlorophenol; 4-chloro-3-methylphenol; 2,4-dinitrophenol; 2-methyl-4,6-dinitrophenol; pentachlorophenol; and 4-nitrophenol.

- 6 Dry weather is assumed for any discharge that occurs when the flow is less than 23 cubic feet per second as measured at the Stearns Street flow gauge in Los Cerritos Channel. Flow information is available by contacting [pkinney@kinneticlabs.com](mailto:pkinney@kinneticlabs.com) or at (562) 595-8700. If the aforementioned contact indicates flow was not measured due to low flow conditions, then dry weather is assumed for compliance with effluent limitations.
- 7 Wet weather is assumed for any discharge that occurs when the flow is equal to or greater than 23 cubic feet per second as measured at the Stearns Street flow gauge in Los Cerritos Channel. Flow information is available by contacting [pkinney@kinneticlabs.com](mailto:pkinney@kinneticlabs.com) or at (562) 595-8700. If the aforementioned contact indicates flow was not measured due to low flow conditions, then dry weather is assumed for compliance with effluent limitations.
- 8 TPH equals the sum of TPH gasoline (C<sup>4</sup>-C<sup>12</sup>), TPH diesel (C<sup>13</sup>-C<sup>12</sup>), and TPH oil (C<sup>23+</sup>).

**E. Interim Effluent Limitations – Not Applicable**

**F. Land Discharge Specifications – Not Applicable**

**G. Recycling Specifications – Not Applicable**

**V. RATIONALE FOR RECEIVING WATER LIMITATIONS**

**A. Surface Water**

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (40 C.F.R. section 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water. If there is reasonable potential or a U.S. EPA-approved TMDL WLA, then WQBELs are included in this Order to ensure protection of water quality standards.

**B. Groundwater – Not Applicable**

**VI. RATIONALE FOR PROVISIONS**

**A. Standard Provisions**

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 C.F.R. allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

**B. Special Provisions**

**1. Reopener Provisions**

These provisions are based on 40 C.F.R. section 123 and the previous Order. The Regional Water Board may reopen the permit to modify permit conditions and

requirements. Causes for modifications include the promulgation of new federal regulations, modification in toxicity requirements, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

**2. Special Studies and Additional Monitoring Requirements**

- a. **Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan.** This provision is based on section 4 of the SIP, Toxicity Control Provisions, which establishes minimum toxicity control requirements for implementing the narrative toxicity objective for aquatic life protection established in the basin plans of the State of California.

**3. Best Management Practices and Pollution Prevention**

a. **Storm Water Pollution Prevention, Best Management Practices, and Spill Contingency Plans**

- i. **Storm Water Pollution Prevention Plan (SWPPP).** This Order requires the Discharger to update, as necessary, and continue to implement a SWPPP. The SWPPP will outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff from being discharged directly into the receiving water. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with storm water, and to prevent the entrainment of trash in storm water that is discharged through Discharge Point 001. SWPPP requirements are included in Attachment G.
- ii. **Best Management Practices Plan (BMPP).** This Order requires the Discharger to update, as necessary, a Best Management Practices Plan (BMPP), that includes site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the State. The BMPs shall be consistent with the general guidance contained in the U.S. EPA Guidance Manual for Developing Best Management Practices (BMPs) (EPA 833-B-93-004). In particular, a risk assessment of each area identified by the Discharger shall be performed to determine the potential for hazardous or toxic waste/material discharge to surface waters.
- iii. **Spill Contingency Plan (SCP).** This Order requires the Discharger to develop and implement a SCP to control the discharge of pollutants. The SCP shall include a technical report on the preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events at the site. This provision is included in this Order to minimize and control the amount of pollutants discharged in case of a spill. The SCP shall be site specific and shall cover all areas of the Facility. A Spill Prevention Containment and Countermeasures (SPCC) Plan may be used to satisfy this requirement.

**4. Construction, Operation, and Maintenance Specifications**

- a. This provision is based on the requirements of 40 C.F.R. section 122.41(e).

**5. Special Provisions for Municipal Facilities (POTW's Only) – Not Applicable**

**6. Other Special Provisions – Not Applicable**

**7. Compliance Schedules – Not Applicable**

## VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 C.F.R. sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

### A. Influent Monitoring – Not Applicable

### B. Effluent Monitoring

#### 1. Discharge Point 001 (Monitoring Location EFF-001)

- a. Monitoring for pollutants expected to be present in the discharge will be required as established in the MRP (Attachment E). To demonstrate compliance with established effluent limitations, the Order includes monitoring requirements for parameters for which effluent limitations have been established.
- b. New monitoring requirements have been included to determine compliance with the new effluent limitations for chromium and COD at Discharge Point 001, consistent with other regulated parameters (once per discharge event).
- c. The MRP of this Order (Attachment E) retains the required monitoring frequency of 1/year for TCDD equivalents and all other priority pollutants for which effluent limitations have not been established. Data generated from this monitoring is necessary for evaluating reasonable potential for the discharge to cause or contribute to an exceedance of applicable water quality objectives during future permit renewals.
- d. Monitoring frequency of once per discharge event for *E. coli* established in Order R4-2011-0050 has been retained in this MRP (Attachment E) in order to assess the impact of the discharge on the beneficial uses of the receiving water. Monitoring requirements for fecal coliform were discontinued in this Order as the Basin Plan objective for bacteria was amended through Resolution R10-005 to omit fecal coliform.
- e. Monitoring requirements for ammonia, Diisopropyl Ether (DIPE), Ethyl Tertiary Butyl Ether (ETBE), Methyl Tertiary Butyl Ether (MTBE), Tertiary Amyl Methyl Ether (TAME), and Tertiary Butyl Alcohol (TBA) are retained in this Order as they remain as pollutants of concern.
- f. Effluent hardness monitoring established in Order R4-2011-0050 has been removed from this Order and has been replaced with upstream receiving water hardness monitoring which will be used to calculate hardness-based criteria.
- g. Settleable solids is a pollutant of concern, commonly found in storm water runoff from industrial sites. As a result, this Order includes new effluent monitoring requirements for settleable solids to be consistent with other permits for similar discharges.

### C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period

of time and may measure mortality, reproduction, and growth. Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects. For this Order, a chronic toxicity limit is established and evaluated using U.S. EPA's 2010 TST statistical approach.

**D. Receiving Water Monitoring**

**1. Surface Water**

Monitoring requirements are included in the MRP (Attachment E) to determine compliance with the receiving water limitations established in Limitations and Discharge Requirements, Receiving Water Limitations, Section V.A. In addition, receiving water monitoring is necessary to collect ambient water quality data to include in future Reasonable Potential Analyses. Receiving water monitoring requirements at upstream monitoring location RSW-001 included in Order R4-2011-0050 have been retained. In addition, this Order includes a new requirement at RSW-001 to monitor upstream ammonia in order to collect data to include in future Reasonable Potential Analyses. This Order includes new requirements to monitor pH, temperature, and ammonia at downstream monitoring location RSW-002 in order to obtain data necessary to calculate the applicable ammonia water quality objective. This Order establishes a new monitoring location of RSW-003, to obtain and report flow in the Los Cerritos Channel. Flow data is used to delineate conditions when wet weather versus dry weather limitations apply in accordance with the Los Cerritos Channel Metals TMDL.

**2. Groundwater – Not Applicable**

**E. Other Monitoring Requirements**

- 1. Rainfall Monitoring and Visual Observation.** Because the discharge is comprised solely of storm water, the Discharger is required to measure and record the rainfall each day of the month. The Discharger is also required to conduct visual observations during all storm water discharges to document the presence of trash, floating and suspended materials, oil and grease, discoloration, turbidity, and odor. These requirements are retained from Order No. R4-2011-0050.

**VIII. PUBLIC PARTICIPATION**

The Regional Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the Paramount Petroleum Corporation, Paramount Petroleum Refinery. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDR's and has encouraged public participation in the WDR adoption process.

**A. Notification of Interested Parties**

The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the following email and publication in the local newspaper; relevant documents to the tentative permit were also available on the Regional Water Board website.

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/losangeles>



**B. Written Comments**

Interested persons were invited to submit written comments concerning tentative WDR's as provided through the notification process electronically at [losangeles@waterboards.ca.gov](mailto:losangeles@waterboards.ca.gov) with a copy to [Namiraj.Jain@waterboards.ca.gov](mailto:Namiraj.Jain@waterboards.ca.gov).

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 5:00 p.m. on November 14, 2016.

**C. Public Hearing**

The **Regional Water Board** held a public hearing on the tentative WDR's during its regular Board meeting on the following date and time and at the following location:

Date: December 8, 2016  
Time: 9:00 a.m.  
Location: City of Simi Valley (Council Chambers)  
2929 Tapo Canyon Road  
Simi Valley, California 93063

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

**D. Reconsideration of Waste Discharge Requirements**

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be received by the State Water Board at the following address within 30 calendar days of the Regional Water Board's 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 for review, see [http://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**

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling 213-576-6600.

The tentative WDRs, comments received and response to comments are also available on the Regional Water Board's website at:

[http://www.waterboards.ca.gov/losangeles/board\\_decisions/tentative\\_orders/index.shtml](http://www.waterboards.ca.gov/losangeles/board_decisions/tentative_orders/index.shtml)

**F. Register of Interested Persons**

Any person interested in being placed on the mailing list for information regarding the WDR's and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

**G. Additional Information**

Requests for additional information or questions regarding this order should be directed to Namiraj Jain at (213) 620-6003.

## **ATTACHMENT G – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS**

### **I. IMPLEMENTATION SCHEDULE**

A storm water pollution prevention plan (SWPPP) shall be developed and submitted to the Regional Water Board within 90 days following the adoption of this Order. The SWPPP shall be implemented for each facility covered by this Permit within 10 days of approval from the Regional Water Board, or no later than 90 days from the date of the submittal of the SWPPP to the Regional Water Board (whichever comes first).

### **II. OBJECTIVES**

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, overhead coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

### **III. PLANNING AND ORGANIZATION**

#### **A. Pollution Prevention Team**

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Attachment E of this Permit. The SWPPP shall clearly identify Permit related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

**B. Review Other Requirements and Existing Facility Plans**

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this Permit. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

**IV. SITE MAP**

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

**TABLE A  
FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL  
STORM WATER POLLUTION PREVENTION PLANS**

<b>PLANNING AND ORGANIZATION</b> Form Pollution Prevention Team Review other plans
<b>ASSESSMENT PHASE</b> Develop a site map Identify potential pollutant sources Inventory of materials and chemicals List significant spills and leaks Identify non-storm water discharges Assess pollutant risks
<b>BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE</b> Non-structural BMPs Structural BMPs Select activity and site-specific BMPs

<b>IMPLEMENTATION PHASE</b> Train employees Implement BMPs Conduct recordkeeping and reporting
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<b>EVALUATION / MONITORING</b> Conduct annual site evaluation Review monitoring information Evaluate BMPs Review and revise SWPPP
---

The following information shall be included on the site map:

- A.** The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.
- B.** The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.
- C.** An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.
- D.** Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in section VI.A.4 below have occurred.
- E.** Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

**V. LIST OF SIGNIFICANT MATERIALS**

The SWPPP shall include a list of significant materials<sup>1</sup> handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials,

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<sup>1</sup> "Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERLCA); any chemical the facility is required to report pursuant to Section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

intermediate products, final or finished products, recycled materials, and waste or disposed materials.

## VI. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

A. The SWPPP shall include a narrative description of the facility's industrial activities, as identified in section IV.E above, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

1. **Industrial Processes.** Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.
2. **Material Handling and Storage Areas.** Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.
3. **Dust and Particulate Generating Activities.** Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.
4. **Significant Spills and Leaks.** Describe materials that have spilled or leaked in significant quantities in storm water discharges or authorized non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 Code of Federal Regulations (CFR), part 302) that have been discharged to storm water as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 CFR, parts 110, 117, and 302).

The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or authorized non-storm water discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this Permit.

5. **Non-Storm Water Discharges.** Facility operators shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

All non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area.

Non-storm water discharges that are not authorized by this Permit, other waste discharge requirements, or other NPDES permits are prohibited. The SWPPP must include BMPs to prevent or reduce contact of authorized non-storm water discharges with significant materials (as defined in Footnote 1 of section V above) or equipment.

6. **Soil Erosion.** Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.
  7. **Trash.** Describe the facility locations where trash may be generated as a result of facility operations and on-site activities.
- B.** The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similar to Table B. The last column of Table B, "Control Practices", should be completed in accordance with section VIII. below.

## VII. ASSESSMENT OF POTENTIAL POLLUTANT SOURCES

- A.** The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in VI above to determine:
1. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and
  2. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.
- B.** Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in section VIII below.

## VIII. STORM WATER BEST MANAGEMENT PRACTICES

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (sections VI and VII above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

**TABLE B**  
**EXAMPLE**  
**ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND**  
**CORRESPONDING BEST MANAGEMENT PRACTICES**  
**SUMMARY**

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery.  Spills caused by topping off fuel tanks.  Hosing or washing down fuel oil fuel area.  Leaking storage tanks.    Rainfall running off fuel oil, and rainfall running onto and off fueling area.	fuel oil	Use spill and overflow protection.  Minimize run-on of storm water into the fueling area.  Cover fueling area.  Use dry cleanup methods rather than hosing down area.  Implement proper spill prevention control program.  Implement adequate preventative maintenance program to preventive tank and line leaks.  Inspect fueling areas regularly to detect problems before they occur.  Train employees on proper fueling, cleanup, and spill response techniques.

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

Facility operators shall consider the following BMPs for implementation at the facility:

**A. Non-Structural BMPs**

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs (see section A.8.b. below). Below is a list of non-structural BMPs that should be considered:

1. **Good Housekeeping.** Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility.



2. **Preventive Maintenance.** Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.
3. **Spill Response.** This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.
4. **Material Handling and Storage.** This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.
5. **Employee Training.** This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.
6. **Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.
7. **Recordkeeping and Internal Reporting.** This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.
8. **Erosion Control and Site Stabilization.** This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.
9. **Inspections.** This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.
10. **Quality Assurance.** This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

#### **B. Structural BMPs.**

Where non-structural BMPs as identified in section VII.A.8 above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that should be considered:

1. **Overhead Coverage.** This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.
2. **Retention Ponds.** This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.
3. **Control Devices.** This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

4. **Secondary Containment Structures.** This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.
5. **Treatment.** This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

#### **IX. ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION**

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented 10 days of the approval by the Executive Officer or no later than 90 days after submission to the Regional Water Board, whichever comes first. Evaluations shall include the following:

- A. A review of all visual observation records, inspection records, and sampling and analysis results.
- B. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.
- C. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.
- D. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in section X.E., for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions V.B.5 of Attachment E.

#### **X. SWPPP GENERAL REQUIREMENTS**

- A. The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.
- B. The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.
- C. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

- D. The SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this Permit.
- E. When any part of the SWPPP is infeasible to implement due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.
- F. The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under section 308(b) of the Clean Water Act.

**ATTACHMENT H – STATE WATER BOARD MINIMUM LEVELS IN MICROGRAMS/LITER (µg/L)**

The Minimum Levels (MLs) in this appendix are for use in reporting and compliance determination purposes in accordance with section 2.4 of the State Implementation Policy. These MLs were derived from data for priority pollutants provided by State certified analytical laboratories in 1997 and 1998. These ML's shall be used until new values are adopted by the State Water Board and become effective. The following tables (Tables 2a - 2d) present MLs for four major chemical groupings: volatile substances, semi-volatile substances, inorganics, and pesticides and PCB's.

Table 2a - VOLATILE SUBSTANCES*	GC	GCMS
1,1 Dichloroethane	0.5	1
1,1 Dichloroethylene	0.5	2
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
1,2 Dichlorobenzene (volatile)	0.5	2
1,2 Dichloroethane	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichlorobenzene (volatile)	0.5	2
1,3 Dichloropropene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Methyl Bromide	1.0	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromo-methane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Chloromethane	0.5	2
Dichlorobromo-methane	0.5	2
Dichloromethane	0.5	2
Ethylbenzene	0.5	2
Tetrachloroethylene	0.5	2
Toluene	0.5	2
Trans-1,2 Dichloroethylene	0.5	1
Trichloroethene	0.5	2
Vinyl Chloride	0.5	2

\*The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Benzo (a) Anthracene	10	5		
1,2 Dichlorobenzene (semivolatile)	2	2		
1,2 Diphenylhydrazine		1		
1,2,4 Trichlorobenzene	1	5		
1,3 Dichlorobenzene (semivolatile)	2	1		
1,4 Dichlorobenzene (semivolatile)	2	1		
2 Chlorophenol	2	5		
2,4 Dichlorophenol	1	5		
2,4 Dimethylphenol	1	2		
2,4 Dinitrophenol	5	5		
2,4 Dinitrotoluene	10	5		
2,4,6 Trichlorophenol	10	10		
2,6 Dinitrotoluene		5		
2- Nitrophenol		10		
2-Chloroethyl vinyl ether	1	1		
2-Chloronaphthalene		10		
3,3' Dichlorobenzidine		5		
Benzo (b) Fluoranthene		10	10	
3-Methyl-Chlorophenol	5	1		
4,6 Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl phenyl ether	10	5		
4-Chlorophenyl phenyl ether		5		
Acenaphthene	1	1	0.5	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo(a) pyrene		10	2	
Benzo(g,h,i)perylene		5	0.1	
Benzo(k)fluoranthene		10	2	
bis 2-(1-Chloroethoxyl) methane		5		
bis(2-chloroethyl) ether	10	1		
bis(2-Chloroisopropyl) ether	10	2		
bis(2-Ethylhexyl) phthalate	10	5		
Butyl benzyl phthalate	10	10		
Chrysene		10	5	
di-n-Butyl phthalate		10		
di-n-Octyl phthalate		10		
Dibenzo(a,h)-anthracene		10	0.1	
Diethyl phthalate	10	2		
Dimethyl phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachloro-cyclopentadiene	5	5		
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol **	1	1		50
Pyrene		10	0.05	

\* With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1,000; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1,000.

\*\* Phenol by colorimetric technique has a factor of 1.

Table 2c – INORGANICS*	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1,000
Arsenic		2	10	2	2	1		20	1,000
Beryllium	20	0.5	2	0.5	1				1,000
Cadmium	10	0.5	10	0.25	0.5				1,000
Chromium (total)	50	2	10	0.5	1				1,000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1,000
Cyanide								5	
Lead	20	5	5	0.5	2				10,000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1,000
Selenium		5	10	2	5	1			1,000
Silver	10	1	10	0.25	2				1,000
Thallium	10	2	10	1	5				1,000
Zinc	20		20	1	10				1,000

\* The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2d – PESTICIDES – PCB's*	GC
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
a-Endosulfan	0.02
alpha-BHC	0.01
Aldrin	0.005
b-Endosulfan	0.01
Beta-BHC	0.005
Chlordane	0.1
Delta-BHC	0.005
Dieldrin	0.01

Table 2d – PESTICIDES – PCB's*	GC
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Gamma-BHC (Lindane)	0.02
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

\* The normal method-specific factor for these substances is 100; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.

Techniques:

- GC - Gas Chromatography
- GCMS - Gas Chromatography/Mass Spectrometry
- HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
- LC - High Pressure Liquid Chromatography
- FAA - Flame Atomic Absorption
- GFAA - Graphite Furnace Atomic Absorption
- HYDRIDE - Gaseous Hydride Atomic Absorption
- CVAA - Cold Vapor Atomic Absorption
- ICP - Inductively Coupled Plasma
- ICPMS - Inductively Coupled Plasma/Mass Spectrometry
- SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
- DCP - Direct Current Plasma
- COLOR – Colorimetric

**ATTACHMENT I – LIST OF PRIORITY POLLUTANTS**

CTR Number	Parameter	CAS Number	Analytical Methods
1	Antimony	7440360	1
2	Arsenic	7440382	1
3	Beryllium	7440417	1
4	Cadmium	7440439	1
5a	Chromium (III)	16065831	1
5a	Chromium (VI)	18540299	1
6	Copper	7440508	1
7	Lead	7439921	1
8	Mercury	7439976	1
9	Nickel	7440020	1
11	Selenium	7782492	1
11	Silver	7440224	1
12	Thallium	7440280	1
13	Zinc	7440666	1
14	Cyanide	57125	1
15	Asbestos	1332214	1
16	2,3,7,8-TCDD	1746016	1
17	Acrolein	117028	1
18	Acrylonitrile	117131	1
19	Benzene	71432	1
20	Bromoform	75252	1
21	Carbon Tetrachloride	56235	1
22	Chlorobenzene	118907	1
23	Chlorodibromomethane	124481	1
24	Chloroethane	75003	1
25	2-Chloroethylvinyl Ether	111758	1
26	Chloroform	67663	1
27	Dichlorobromomethane	75274	1
28	1,1-Dichloroethane	75343	1
29	1,2-Dichloroethane	117062	1
30	1,1-Dichloroethylene	75354	1
31	1,2-Dichloropropane	78875	1
32	1,3-Dichloropropylene	542756	1
33	Ethylbenzene	110414	1
34	Methyl Bromide	74839	1
35	Methyl Chloride	74873	1
36	Methylene Chloride	75092	1
37	1,1,2,2-Tetrachloroethane	79345	1
38	Tetrachloroethylene	127184	1
39	Toluene	118883	1
40	1,2-Trans-Dichloroethylene	156605	1
41	1,1,1-Trichloroethane	71556	1
42	1,1,2-Trichloroethane	79005	1
43	Trichloroethylene	79016	1
44	Vinyl Chloride	75014	1
45	2-Chlorophenol	95578	1
46	2,4-Dichlorophenol	120832	1
47	2,4-Dimethylphenol	115679	1



CTR Number	Parameter	CAS Number	Analytical Methods
48	2-Methyl-4,6-Dinitrophenol	534521	1
49	2,4-Dinitrophenol	51285	1
50	2-Nitrophenol	88755	1
51	4-Nitrophenol	110027	1
52	3-Methyl-4-Chlorophenol	59507	1
53	Pentachlorophenol	87865	1
54	Phenol	118952	1
55	2,4,6-Trichlorophenol	88062	1
56	Acenaphthene	83329	1
57	Acenaphthylene	208968	1
58	Anthracene	120127	1
59	Benzidine	92875	1
60	Benzo(a)Anthracene	56553	1
61	Benzo(a)Pyrene	50328	1
62	Benzo(b)Fluoranthene	205992	1
63	Benzo(ghi)Perylene	191242	1
64	Benzo(k)Fluoranthene	207089	1
65	Bis(2-Chloroethoxy)Methane	111911	1
66	Bis(2-Chloroethyl)Ether	111444	1
67	Bis(2-Chloroisopropyl)Ether	118601	1
68	Bis(2-Ethylhexyl)Phthalate	117817	1
69	4-Bromophenyl Phenyl Ether	111553	1
70	Butylbenzyl Phthalate	85687	1
71	2-Chloronaphthalene	91587	1
72	4-Chlorophenyl Phenyl Ether	7005723	1
73	Chrysene	218019	1
74	Dibenzo(a,h)Anthracene	53703	1
75	1,2-Dichlorobenzene	95501	1
76	1,3-Dichlorobenzene	541731	1
77	1,4-Dichlorobenzene	116467	1
78	3,3'-Dichlorobenzidine	91941	1
79	Diethyl Phthalate	84662	1
80	Dimethyl Phthalate	131113	1
81	Di-n-Butyl Phthalate	84742	1
82	2,4-Dinitrotoluene	121142	1
83	2,6-Dinitrotoluene	606202	1
84	Di-n-Octyl Phthalate	117840	1
85	1,2-Diphenylhydrazine	122667	1
86	Fluoranthene	206440	1
87	Fluorene	86737	1
88	Hexachlorobenzene	118741	1
89	Hexachlorobutadiene	87863	1
90	Hexachlorocyclopentadiene	77474	1
91	Hexachloroethane	67721	1
92	Indeno(1,2,3-cd)Pyrene	193395	1
93	Isophorone	78591	1
94	Naphthalene	91203	1
95	Nitrobenzene	98953	1
96	N-Nitrosodimethylamine	62759	1
97	N-Nitrosodi-n-Propylamine	621647	1
98	N-Nitrosodiphenylamine	86306	1
99	Phenanthrene	85018	1
100	Pyrene	129000	1

CTR Number	Parameter	CAS Number	Analytical Methods
101	1,2,4-Trichlorobenzene	120821	1
102	Aldrin	309002	1
103	alpha-BHC	319846	1
104	beta-BHC	319857	1
105	gamma-BHC	58899	1
106	delta-BHC	319868	1
107	Chlordane	57749	1
108	4,4'-DDT	50293	1
109	4,4'-DDE	72559	1
110	4,4'-DDD	72548	1
111	Dieldrin	60571	1
112	alpha-Endosulfan	959988	1
113	beta-Endosulfan	33213659	1
114	Endosulfan Sulfate	1131178	1
115	Endrin	72208	1
116	Endrin Aldehyde	7421934	1
117	Heptachlor	76448	1
118	Heptachlor Epoxide	1124573	1
119	PCB-1116	12674112	1
120	PCB-1221	11114282	1
121	PCB-1232	11141165	1
122	PCB-1242	53469219	1
123	PCB-1248	12672296	1
124	PCB-1254	11197691	1
125	PCB-1260	11196825	1
126	Toxaphene	8001352	1

<sup>1</sup> Pollutants shall be analyzed using the methods described in 40 C.F.R Part 136.

**ATTACHMENT J – SUMMARY OF REASONABLE POTENTIAL ANALYSIS AND WQBEL CALCULATIONS**

Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Paramount Petroleum Corporation, Paramount Refinery (CA0056065), Discharge Point No. 001

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C or WLAS	MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?	Are all B data points non-detects (Y/N)?
					Freshwater		Saltwater		Human Health for consumption of:						
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only					
1	Antimony	ug/L		2						4300.00	4300.00	No	No	N	
2	Arsenic	ug/L		0.2	340.00	150.00					150.00	No	No	N	
3	Beryllium	ug/L		No Criteria						Narrative	No Criteria	No Criteria	No Criteria	N	
4	Cadmium	ug/L		0.1	1.03	0.88				Narrative	0.88	No	No	N	
5a	Chromium (III)				594.24	70.83				Narrative	70.83			N	
5b	Chromium (VI)	ug/L	0.6	0.2	16.00	11.00				Narrative	11.00	No	No	N	
6	Copper, Dry Weather WLA	ug/L	0.6	0.3		19.1					19.1	No	No	N	
6	Copper, Wet Weather WLA	ug/L	0.6	0.3	9.80						9.80	No	No	N	
7	Lead	ug/L		0.1	15.42	0.60				Narrative	0.60	No	No	N	
7	Lead, Wet Weather WLA	ug/L	0.6	5	55.80						55.80	No	No	N	
8	Mercury	ug/L	0.6		Reserved	Reserved				0.05100	0.05100			N	
9	Nickel	ug/L		5	154.98	17.23				4600.00	17.23	No	No	N	
10	Selenium	ug/L		0.3	20.00	5.00				Narrative	5.00	No	No	N	
11	Silver	ug/L		0.1	0.43						0.43	No	No	N	
12	Thallium	ug/L		0.1						6.30	6.30	No	No	N	
13	Zinc	ug/L	0.6	458	187.83	187.83					187.8	Yes	Yes	N	
13	Zinc, Wet Weather WLA	ug/L	0.6	27	95.60						95.6	No	No	N	
14	Cyanide	ug/L			22.00	5.20				220000.0	5.20			N	
15	Asbestos	MFL		No Criteria							No Criteria	No Criteria	No Criteria	N	
16	2,3,7,8 TCDD	ug/L	0.6	5.166E-06						1.4E-08	1.40E-08	Yes	Yes	N	
	TCDD Equivalents	ug/L	0	5.166E-06						1.4E-08	1.40E-08	Yes	Yes	N	
17	Acrolein	ug/L		10						780.0	780	No	No	N	
18	Acrylonitrile	ug/L								0.66	0.660			N	
19	Benzene	ug/L		1						71	71.0	No	No	N	
20	Bromoform	ug/L		1						360	360.0	No	No	N	
21	Carbon Tetrachloride	ug/L		1						4.4	4.40	No	No	N	
22	Chlorobenzene	ug/L		1						21000	21000	No	No	N	
23	Chlorodibromomethane	ug/L		1						34	34.00	No	No	N	
24	Chloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
25	2-Chloroethylvinyl ether	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
26	Chloroform	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
27	Dichlorobromomethane	ug/L		1						46	46.00	No	No	N	
28	1,1-Dichloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
29	1,2-Dichloroethane	ug/L		1						99	99.00	No	No	N	
30	1,1-Dichloroethylene	ug/L		1						3.2	3.200	No	No	N	
31	1,2-Dichloropropane	ug/L		1						39	39.00	No	No	N	
32	1,3-Dichloropropylene	ug/L		1						1700	1700	No	No	N	
33	Ethylbenzene	ug/L		1						29000	29000	No	No	N	
34	Methyl Bromide	ug/L		1						4000	4000	No	No	N	
35	Methyl Chloride	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
36	Methylene Chloride	ug/L		5						1600	1600.0	No	No	N	
37	1,1,2,2-Tetrachloroethane	ug/L		1						11	11.00	No	No	N	
38	Tetrachloroethylene	ug/L		1						8.85	8.9	No	No	N	
39	Toluene	ug/L		1						200000	200000	No	No	N	
40	1,2-Trans-Dichloroethylene	ug/L		1						140000	140000	No	No	N	
41	1,1,1-Trichloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
42	1,1,2-Trichloroethane	ug/L		1						42	42.0	No	No	N	
43	Trichloroethylene	ug/L		1						81	81.0	No	No	N	
44	Vinyl Chloride	ug/L		1						525	525	No	No	N	
45	2-Chlorophenol	ug/L		10						400	400	No	No	N	
46	2,4-Dichlorophenol	ug/L		10						790	790	No	No	N	
47	2,4-Dimethylphenol	ug/L		10						2300	2300	No	No	N	
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L		10						765	765.0	No	No	N	

Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Paramount Petroleum Corporation, Paramount Refinery (CA0056065), Discharge Point No. 001

CTR#	Parameters	REASONABLE POTENTIAL ANALYSIS (RPA)							HUMAN HEALTH CALCULATIONS			
		If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?	Reason	Organisms only			
									AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh	ECA acute multiplier (p.7)
1	Antimony				No detected value of B, Step 7		No	Ud;MEC<C & no B				
2	Arsenic				No detected value of B, Step 7		No	Ud;MEC<C & no B				
3	Beryllium				No Criteria	No Criteria	Uc	No Criteria				
4	Cadmium				No detected value of B, Step 7		No	Ud;MEC<C & no B				
5a	Chromium (III)				No detected value of B, Step 7		Ud	No effluent data & no B				
5b	Chromium (VI)				No detected value of B, Step 7		No	Ud;MEC<C & no B		2.01		0.32
6	Copper, Dry Weather WLA				No detected value of B, Step 7		No	Ud;MEC<C & no B				0.32
6	Copper, Wet Weather WLA				No detected value of B, Step 7		No	Ud;MEC<C & no B				0.32
7	Lead				No detected value of B, Step 7		No	Ud;MEC<C & no B				
7	Lead, Wet Weather WLA				No detected value of B, Step 7		No	Ud;MEC<C & no B				0.32
8	Mercury				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No	0.05100	2.00619	0.10232	
9	Nickel				No detected value of B, Step 7		No	Ud;MEC<C & no B				
10	Selenium				No detected value of B, Step 7		No	Ud;MEC<C & no B				
11	Silver				No detected value of B, Step 7		No	Ud;MEC<C & no B				
12	Thallium				No detected value of B, Step 7		No	Ud;MEC<C & no B				
13	Zinc				No detected value of B, Step 7		Yes	MEC>=C		2.01		0.32
13	Zinc, Wet Weather WLA				No detected value of B, Step 7		No	Ud;MEC<C & no B				0.32
14	Cyanide				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
15	Asbestos				No Criteria	No Criteria	Uc	No Criteria				
16	2,3,7,8 TCDD				No detected value of B, Step 7		Yes	MEC>=C	0.000000014	2.01	0.00000	
	TCDD Equivalents				No detected value of B, Step 7		Yes	MEC>=C	1.40E-08	2.01	2.81E-08	
17	Acrolein				No detected value of B, Step 7		No	Ud;MEC<C & no B				
18	Acrylonitrile				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
19	Benzene				No detected value of B, Step 7		No	Ud;MEC<C & no B				
20	Bromoform				No detected value of B, Step 7		No	Ud;MEC<C & no B				
21	Carbon Tetrachloride				No detected value of B, Step 7		No	Ud;MEC<C & no B				
22	Chlorobenzene				No detected value of B, Step 7		No	Ud;MEC<C & no B				
23	Chlorodibromomethane				No detected value of B, Step 7		No	Ud;MEC<C & no B				
24	Chloroethane				No Criteria	No Criteria	Uc	No Criteria				
25	2-Chloroethylvinyl ether				No Criteria	No Criteria	Uc	No Criteria				
26	Chloroform				No Criteria	No Criteria	Uc	No Criteria				
27	Dichlorobromomethane				No detected value of B, Step 7		No	Ud;MEC<C & no B				
28	1,1-Dichloroethane				No Criteria	No Criteria	Uc	No Criteria				
29	1,2-Dichloroethane				No detected value of B, Step 7		No	Ud;MEC<C & no B				
30	1,1-Dichloroethylene				No detected value of B, Step 7		No	Ud;MEC<C & no B				
31	1,2-Dichloropropane				No detected value of B, Step 7		No	Ud;MEC<C & no B				
32	1,3-Dichloropropylene				No detected value of B, Step 7		No	Ud;MEC<C & no B				
33	Ethylbenzene				No detected value of B, Step 7		No	Ud;MEC<C & no B				
34	Methyl Bromide				No detected value of B, Step 7		No	Ud;MEC<C & no B				
35	Methyl Chloride				No Criteria	No Criteria	Uc	No Criteria				
36	Methylene Chloride				No detected value of B, Step 7		No	Ud;MEC<C & no B				
37	1,1,2,2-Tetrachloroethane				No detected value of B, Step 7		No	Ud;MEC<C & no B				
38	Tetrachloroethylene				No detected value of B, Step 7		No	Ud;MEC<C & no B				
39	Toluene				No detected value of B, Step 7		No	Ud;MEC<C & no B				
40	1,2-Trans-Dichloroethylene				No detected value of B, Step 7		No	Ud;MEC<C & no B				
41	1,1,1-Trichloroethane				No Criteria	No Criteria	Uc	No Criteria				
42	1,1,2-Trichloroethane				No detected value of B, Step 7		No	Ud;MEC<C & no B				
43	Trichloroethylene				No detected value of B, Step 7		No	Ud;MEC<C & no B				
44	Vinyl Chloride				No detected value of B, Step 7		No	Ud;MEC<C & no B				
45	2-Chlorophenol				No detected value of B, Step 7		No	Ud;MEC<C & no B				
46	2,4-Dichlorophenol				No detected value of B, Step 7		No	Ud;MEC<C & no B				
47	2,4-Dimethylphenol				No detected value of B, Step 7		No	Ud;MEC<C & no B				
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)				No detected value of B, Step 7		No	Ud;MEC<C & no B				

Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Paramount Petroleum Corporation, Paramount Refinery (CA0056065), Discharge Point No. 001

CTR#	Parameters	AQUATIC LIFE CALCULATIONS								LIMITS		Recommendation	Comment
		Saltwater / Freshwater / Basin Plan											
		LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life	Lowest AMEL	Lowest MDEL		
1	Antimony											No Limit	
2	Arsenic											No Limit	
3	Beryllium											No Limit	
4	Cadmium											No Limit	
5a	Chromium (III)											No Limit	
5b	Chromium (VI)	5.14	0.53	5.80	5.14	1.55	7.98	3.11	16.00	8.0	16	Apply WQBEL	More stringent than ELG limits
6	Copper, Dry Weather WLA		0.53	10.07	10.07	1.55	15.64	3.11	31.37498	16	31	Apply WQBEL	TMDL Dry Weather WLA
6	Copper, Wet Weather WLA	3.15			3.15	1.55	4.88	3.11	9.8	4.9	9.8	Apply WQBEL	TMDL Wet Weather WLA
7	Lead											No Limit	
7	Lead, Wet Weather WLA	17.92			17.92	1.55	27.81	3.11	55.8	28	56	Apply WQBEL	TMDL Wet Weather WLA
8	Mercury					1.55242		3.11446		0.051	0.10	Apply WQBEL	More stringent than existing BPJ limit
9	Nickel											No Limit	
10	Selenium											No Limit	
11	Silver											No Limit	
12	Thallium											No Limit	
13	Zinc	60.31	0.53	99.07	60.31	1.55	93.63	3.11	187.83	94	188	Apply WQBEL	CTR criteria based on dry weather hardness
13	Zinc, Wet Weather WLA	30.70			30.70	1.55	47.65	3.11	95.6	48	96	Apply WQBEL	TMDL Wet Weather WLA
14	Cyanide											No Limit	
15	Asbestos											No Limit	
16	2,3,7,8 TCDD					1.55		3.11				No Limit	All detected values are DNQ
	TCDD Equivalents					1.55		3.11				No Limit	MEC based on DNQs
17	Acrolein											No Limit	
18	Acrylonitrile											No Limit	
19	Benzene											No Limit	
20	Bromoform											No Limit	
21	Carbon Tetrachloride											No Limit	
22	Chlorobenzene											No Limit	
23	Chlorodibromomethane											No Limit	
24	Chloroethane											No Limit	
25	2-Chloroethylvinyl ether											No Limit	
26	Chloroform											No Limit	
27	Dichlorobromomethane											No Limit	
28	1,1-Dichloroethane											No Limit	
29	1,2-Dichloroethane											No Limit	
30	1,1-Dichloroethylene											No Limit	
31	1,2-Dichloropropane											No Limit	
32	1,3-Dichloropropylene											No Limit	
33	Ethylbenzene											No Limit	
34	Methyl Bromide											No Limit	
35	Methyl Chloride											No Limit	
36	Methylene Chloride											No Limit	
37	1,1,2,2-Tetrachloroethane											No Limit	
38	Tetrachloroethylene											No Limit	
39	Toluene											No Limit	
40	1,2-Trans-Dichloroethylene											No Limit	
41	1,1,1-Trichloroethane											No Limit	
42	1,1,2-Trichloroethane											No Limit	
43	Trichloroethylene											No Limit	
44	Vinyl Chloride											No Limit	
45	2-Chlorophenol											No Limit	
46	2,4-Dichlorophenol											No Limit	
47	2,4-Dimethylphenol											No Limit	
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)											No Limit	

Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Paramount Petroleum Corporation, Paramount Refinery (CA0056065), Discharge Point No. 001

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C or WLAS	MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?	Are all B data points non-detects (Y/N)?
					Freshwater		Saltwater		Human Health for consumption of:						
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only					
49	2,4-Dinitrophenol	ug/L		10						14000	14000	No	No	N	
50	2-Nitrophenol	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
51	4-Nitrophenol	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
53	Pentachlorophenol	ug/L			5.28	4.05				8.2	4.05			N	
54	Phenol	ug/L		10						4600000	4600000	No	No	N	
55	2,4,6-Trichlorophenol	ug/L								6.5	6.5			N	
56	Acenaphthene	ug/L		10						2700	2700	No	No	N	
57	Acenaphthylene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
58	Anthracene	ug/L		10						110000	110000	No	No	N	
59	Benzidine	ug/L								0.00054	0.00054			N	
60	Benzo(a)Anthracene	ug/L								0.049	0.049			N	
61	Benzo(a)Pyrene	ug/L								0.049	0.049			N	
62	Benzo(b)Fluoranthene	ug/L								0.049	0.049			N	
63	Benzo(ghi)Perylene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
64	Benzo(k)Fluoranthene	ug/L								0.049	0.049			N	
65	Bis(2-Chloroethoxy)Methane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
66	Bis(2-Chloroethyl)Ether	ug/L								1.4	1.400			N	
67	Bis(2-Chloroisopropyl)Ether	ug/L		10						170000	170000	No	No	N	
68	Bis(2-Ethylhexyl)Phthalate	ug/L								5.9	5.9			N	
69	4-Bromophenyl Phenyl Ether	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
70	Butylbenzyl Phthalate	ug/L		10						5200	5200	No	No	N	
71	2-Chloronaphthalene	ug/L		10						4300	4300	No	No	N	
72	4-Chlorophenyl Phenyl Ether	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
73	Chrysene	ug/L								0.049	0.049			N	
74	Dibenzo(a,h)Anthracene	ug/L								0.049	0.049			N	
75	1,2-Dichlorobenzene	ug/L		1						17000	17000	No	No	N	
76	1,3-Dichlorobenzene	ug/L		1						2600	2600	No	No	N	
77	1,4-Dichlorobenzene	ug/L		1						2600	2600	No	No	N	
78	3,3 Dichlorobenzidine	ug/L								0.077	0.08			N	
79	Diethyl Phthalate	ug/L		10						120000	120000	No	No	N	
80	Dimethyl Phthalate	ug/L		10						2900000	2900000	No	No	N	
81	Di-n-Butyl Phthalate	ug/L		20						12000	12000	No	No	N	
82	2,4-Dinitrotoluene	ug/L								9.10	9.10			N	
83	2,6-Dinitrotoluene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
84	Di-n-Octyl Phthalate	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
85	1,2-Diphenylhydrazine	ug/L								0.54	0.540			N	
86	Fluoranthene	ug/L		10						370	370	No	No	N	
87	Fluorene	ug/L		10						14000	14000	No	No	N	
88	Hexachlorobenzene	ug/L								0.00077	0.00077			N	
89	Hexachlorobutadiene	ug/L		1						50	50.00	No	No	N	
90	Hexachlorocyclopentadiene	ug/L		10						17000	17000	No	No	N	
91	Hexachloroethane	ug/L								8.9	8.9			N	
92	Indeno(1,2,3-cd)Pyrene	ug/L								0.049	0.049			N	
93	Isophorone	ug/L		10						600	600.0	No	No	N	
94	Naphthalene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
95	Nitrobenzene	ug/L		10						1900	1900	No	No	N	
96	N-Nitrosodimethylamine	ug/L								8.10	8.10000			N	
97	N-Nitrosodi-n-Propylamine	ug/L								1.40	1.400			N	
98	N-Nitrosodiphenylamine	ug/L		10						16	16.0	No	No	N	
99	Phenanthrene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
100	Pyrene	ug/L		10						11000.00	11000.00	No	No	N	
101	1,2,4-Trichlorobenzene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	

Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Paramount Petroleum Corporation, Paramount Refinery (CA0056065), Discharge Point No. 001

CTR#	Parameters	REASONABLE POTENTIAL ANALYSIS (RPA)							HUMAN HEALTH CALCULATIONS			
		If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?	Reason	Organisms only			
									AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh	ECA acute multiplier (p.7)
49	2,4-Dinitrophenol				No detected value of B, Step 7	No	Ud;MEC<C & no B					
50	2-Nitrophenol				No Criteria	No Criteria	Uc	No Criteria				
51	4-Nitrophenol				No Criteria	No Criteria	Uc	No Criteria				
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)				No Criteria	No Criteria	Uc	No Criteria				
53	Pentachlorophenol				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
54	Phenol				No detected value of B, Step 7	No	Ud;MEC<C & no B					
55	2,4,6-Trichlorophenol				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
56	Acenaphthene				No detected value of B, Step 7	No	Ud;MEC<C & no B					
57	Acenaphthylene				No Criteria	No Criteria	Uc	No Criteria				
58	Anthracene				No detected value of B, Step 7	No	Ud;MEC<C & no B					
59	Benzidine				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
60	Benzo(a)Anthracene				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
61	Benzo(a)Pyrene				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
62	Benzo(b)Fluoranthene				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
63	Benzo(ghi)Perylene				No Criteria	No Criteria	Uc	No Criteria				
64	Benzo(k)Fluoranthene				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
65	Bis(2-Chloroethoxy)Methane				No Criteria	No Criteria	Uc	No Criteria				
66	Bis(2-Chloroethyl)Ether				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
67	Bis(2-Chloroisopropyl)Ether				No detected value of B, Step 7	No	Ud;MEC<C & no B					
68	Bis(2-Ethylhexyl)Phthalate				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
69	4-Bromophenyl Phenyl Ether				No Criteria	No Criteria	Uc	No Criteria				
70	Butylbenzyl Phthalate				No detected value of B, Step 7	No	Ud;MEC<C & no B					
71	2-Chloronaphthalene				No detected value of B, Step 7	No	Ud;MEC<C & no B					
72	4-Chlorophenyl Phenyl Ether				No Criteria	No Criteria	Uc	No Criteria				
73	Chrysene				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
74	Dibenzo(a,h)Anthracene				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
75	1,2-Dichlorobenzene				No detected value of B, Step 7	No	Ud;MEC<C & no B					
76	1,3-Dichlorobenzene				No detected value of B, Step 7	No	Ud;MEC<C & no B					
77	1,4-Dichlorobenzene				No detected value of B, Step 7	No	Ud;MEC<C & no B					
78	3,3 Dichlorobenzidine				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
79	Diethyl Phthalate				No detected value of B, Step 7	No	Ud;MEC<C & no B					
80	Dimethyl Phthalate				No detected value of B, Step 7	No	Ud;MEC<C & no B					
81	Di-n-Butyl Phthalate				No detected value of B, Step 7	No	Ud;MEC<C & no B					
82	2,4-Dinitrotoluene				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
83	2,6-Dinitrotoluene				No Criteria	No Criteria	Uc	No Criteria				
84	Di-n-Octyl Phthalate				No Criteria	No Criteria	Uc	No Criteria				
85	1,2-Diphenylhydrazine				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
86	Fluoranthene				No detected value of B, Step 7	No	Ud;MEC<C & no B					
87	Fluorene				No detected value of B, Step 7	No	Ud;MEC<C & no B					
88	Hexachlorobenzene				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
89	Hexachlorobutadiene				No detected value of B, Step 7	No	Ud;MEC<C & no B					
90	Hexachlorocyclopentadiene				No detected value of B, Step 7	No	Ud;MEC<C & no B					
91	Hexachloroethane				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
92	Indeno(1,2,3-cd)Pyrene				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
93	Isophorone				No detected value of B, Step 7	No	Ud;MEC<C & no B					
94	Naphthalene				No Criteria	No Criteria	Uc	No Criteria				
95	Nitrobenzene				No detected value of B, Step 7	No	Ud;MEC<C & no B					
96	N-Nitrosodimethylamine				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
97	N-Nitrosodi-n-Propylamine				No detected value of B, Step 7	No	Ud;Effluent ND,MDL>C & No					
98	N-Nitrosodiphenylamine				No detected value of B, Step 7	No	Ud;MEC<C & no B					
99	Phenanthrene				No Criteria	No Criteria	Uc	No Criteria				
100	Pyrene				No detected value of B, Step 7	No	Ud;MEC<C & no B					
101	1,2,4-Trichlorobenzene				No Criteria	No Criteria	Uc	No Criteria				



Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Paramount Petroleum Corporation, Paramount Refinery (CA0056065), Discharge Point No. 001

CTR#	Parameters	AQUATIC LIFE CALCULATIONS								LIMITS		Recommendation	Comment
		Saltwater / Freshwater / Basin Plan								Lowest AMEL	Lowest MDEL		
		LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life				
49	2,4-Dinitrophenol											No Limit	
50	2-Nitrophenol											No Limit	
51	4-Nitrophenol											No Limit	
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)											No Limit	
53	Pentachlorophenol											No Limit	
54	Phenol											No Limit	
55	2,4,6-Trichlorophenol											No Limit	
56	Acenaphthene											No Limit	
57	Acenaphthylene											No Limit	
58	Anthracene											No Limit	
59	Benzidine											No Limit	
60	Benzo(a)Anthracene											No Limit	
61	Benzo(a)Pyrene											No Limit	
62	Benzo(b)Fluoranthene											No Limit	
63	Benzo(ghi)Perylene											No Limit	
64	Benzo(k)Fluoranthene											No Limit	
65	Bis(2-Chloroethoxy)Methane											No Limit	
66	Bis(2-Chloroethyl)Ether											No Limit	
67	Bis(2-Chloroisopropyl)Ether											No Limit	
68	Bis(2-Ethylhexyl)Phthalate											No Limit	
69	4-Bromophenyl Phenyl Ether											No Limit	
70	Butylbenzyl Phthalate											No Limit	
71	2-Chloronaphthalene											No Limit	
72	4-Chlorophenyl Phenyl Ether											No Limit	
73	Chrysene											No Limit	
74	Dibenzo(a,h)Anthracene											No Limit	
75	1,2-Dichlorobenzene											No Limit	
76	1,3-Dichlorobenzene											No Limit	
77	1,4-Dichlorobenzene											No Limit	
78	3,3 Dichlorobenzidine											No Limit	
79	Diethyl Phthalate											No Limit	
80	Dimethyl Phthalate											No Limit	
81	Di-n-Butyl Phthalate											No Limit	
82	2,4-Dinitrotoluene											No Limit	
83	2,6-Dinitrotoluene											No Limit	
84	Di-n-Octyl Phthalate											No Limit	
85	1,2-Diphenylhydrazine											No Limit	
86	Fluoranthene											No Limit	
87	Fluorene											No Limit	
88	Hexachlorobenzene											No Limit	
89	Hexachlorobutadiene											No Limit	
90	Hexachlorocyclopentadiene											No Limit	
91	Hexachloroethane											No Limit	
92	Indeno(1,2,3-cd)Pyrene											No Limit	
93	Isophorone											No Limit	
94	Naphthalene											No Limit	
95	Nitrobenzene											No Limit	
96	N-Nitrosodimethylamine											No Limit	
97	N-Nitrosodi-n-Propylamine											No Limit	
98	N-Nitrosodiphenylamine											No Limit	
99	Phenanthrene											No Limit	
100	Pyrene											No Limit	
101	1,2,4-Trichlorobenzene											No Limit	

Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Paramount Petroleum Corporation, Paramount Refinery (CA0056065), Discharge Point No. 001

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C or WLAs	MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?	Are all B data points non-detects (Y/N)?
					Freshwater		Saltwater		Human Health for consumption of:						
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only					
102	Aldrin	ug/L			3.00					0.00014	0.00014			N	
103	alpha-BHC	ug/L								0.013	0.0130			N	
104	beta-BHC	ug/L								0.046	0.046			N	
105	gamma-BHC	ug/L			0.95					0.063	0.063			N	
106	delta-BHC	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N	
107	Chlordane	ug/L			2.40	0.00				0.00	0.00			N	
108	4,4'-DDT	ug/L			1.10	0.00				0.00	0.00			N	
109	4,4'-DDE (linked to DDT)	ug/L								0.00059	0.00059			N	
110	4,4'-DDD	ug/L								0.00084	0.00084			N	
111	Dieldrin	ug/L			0.24	0.06				0.000	0.000			N	
112	alpha-Endosulfan	ug/L			0.22	0.056				240	0.0560			N	
113	beta-Endosulfan	ug/L			0.22	0.056				240	0.0560			N	
114	Endosulfan Sulfate	ug/L		0.1						240	240	No	No	N	
115	Endrin	ug/L			0.086	0.036				0.81	0.0360			N	
116	Endrin Aldehyde	ug/L		0.1						0.81	0.81	No	No	N	
117	Heptachlor	ug/L			0.52	0.0038				0.00021	0.00021			N	
118	Heptachlor Epoxide	ug/L			0.52	0.0038				0.00011	0.00011			N	
119-125	PCBs sum (2)	ug/L				0.01				0.000	0.000			N	
126	Toxaphene	ug/L			0.73	0.0002				0.00075	0.0002			N	

Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Paramount Petroleum Corporation, Paramount Refinery (CA0056065), Discharge Point No. 001

CTR#	Parameters	REASONABLE POTENTIAL ANALYSIS (RPA)							HUMAN HEALTH CALCULATIONS			
		If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?	Reason	Organisms only			
									AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh	ECA acute multiplier (p.7)
102	Aldrin				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
103	alpha-BHC				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
104	beta-BHC				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
105	gamma-BHC				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
106	delta-BHC				No Criteria	No Criteria	Uc	No Criteria				
107	Chlordane				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
108	4,4'-DDT				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
109	4,4'-DDE (linked to DDT)				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
110	4,4'-DDD				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
111	Dieldrin				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
112	alpha-Endosulfan				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
113	beta-Endosulfan				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
114	Endosulfan Sulfate				No detected value of B, Step 7		No	Ud;MEC<C & no B				
115	Endrin				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
116	Endrin Aldehyde				No detected value of B, Step 7		No	Ud;MEC<C & no B				
117	Heptachlor				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
118	Heptachlor Epoxide				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
119-125	PCBs sum (2)				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				
126	Toxaphene				No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No				

Notes:  
Ud = Undeter  
Uc = Undeter  
C = Water Qu  
B = Backgrou

Attachment J  
Reasonable Potential Analysis and Effluent Limitations  
Paramount Petroleum Corporation, Paramount Refinery (CA0056065), Discharge Point No. 001

CTR#	Parameters	AQUATIC LIFE CALCULATIONS								LIMITS		Recommendation	Comment
		Saltwater / Freshwater / Basin Plan											
		LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life	Lowest AMEL	Lowest MDEL		
102	Aldrin											No Limit	
103	alpha-BHC											No Limit	
104	beta-BHC											No Limit	
105	gamma-BHC											No Limit	
106	delta-BHC											No Limit	
107	Chlordane											No Limit	
108	4,4'-DDT											No Limit	
109	4,4'-DDE (linked to DDT)											No Limit	
110	4,4'-DDD											No Limit	
111	Dieldrin											No Limit	
112	alpha-Endosulfan											No Limit	
113	beta-Endosulfan											No Limit	
114	Endosulfan Sulfate											No Limit	
115	Endrin											No Limit	
116	Endrin Aldehyde											No Limit	
117	Heptachlor											No Limit	
118	Heptachlor Epoxide											No Limit	
119-125	PCBs sum (2)											No Limit	
126	Toxaphene											No Limit	

nined due to lack of data  
nined due to lack of CTR Water Quality Criteria  
ality Criteria  
rd receiving water data