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Attorneys for Petitioner
AES Alamitos, LLC

BEFORE THE HEARING BOARD OF THE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

In the Matter of

AES ALAMITOS, LLC,
[Facility ID No. 115394]

Petitioner,

v.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT,

Respondent.

Case No. 5278-4

DECLARATION OF JOSE PEREZ REGARDING CONSENT CALENDAR FOR REGULAR VARIANCE HEARING

DATE: November 4, 2026
TIME: 9:30 a.m.
PLACE: Hearing Board
South Coast AQMD
21865 Copley Drive
Diamond Bar, CA 91765

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DECLARATION OF JOSE PEREZ

I, Jose Perez, declare:

I. BACKGROUND AND BASIS OF KNOWLEDGE

1. I am the Director of Operations for Petitioner AES Alamitos, LLC ("AES"). In that capacity, I am familiar with the operations of the AES generating facility located at 690 North Studebaker Road, Long Beach, California 90803 (the "Facility"), South Coast Air Quality Management District ("AQMD" or "District") Facility ID No. 115394, including the operation of the legacy once-through cooling ("OTC") generating units, the Facility's air emissions monitoring and source testing obligations, and the Facility's obligations under its National Pollutant Discharge Elimination System ("NPDES") permit. I am submitting this Declaration in support of AES's petition for regular variance, Case No. 5278-4 ("Petition"). I have personal knowledge of the matters set forth in this Declaration, except where otherwise stated, and if called as a witness I could and would competently testify to those matters about which I have personal knowledge.

2. The AES generating Facility in Long Beach includes the Alamitos Energy Center, a combined-cycle gas turbine facility that commenced commercial operations in 2020, and the legacy Alamitos Generating Station, which uses OTC technology. Two of the legacy OTC units—Unit 3 and Unit 4 (collectively, the "Units")—are the subject of the Petition. Unit 3 consists of Boiler No. 3 (Device ID D45) and its associated selective catalytic reduction unit (Device ID C139); Unit 4 consists of Boiler No. 4 (Device ID D48) and its associated selective catalytic reduction unit (Device ID C141). Each boiler is a 3,350 mmBTU/hr natural gas-fired steam generating boiler that drives a 320 MW electric generating unit.

3. The Alamitos Generating Station was one of several longstanding once-through cooling electric generating plants deemed necessary to remain available to serve the State's electricity needs in peak demand, thereby resulting in an extension of the final compliance date of the once-through cooling policy ("OTC Deadline") originally received for the 2020-2023 time period and extended again for the 2024-2026 timeframe.

4. As a part of this process, the Alamitos Generating Station is included in the State Electricity Supply Strategic Reliability Reserve Program administered by the California Department of Water Resources ("DWR"). This program is intended to support grid reliability while minimizing environmental impacts and limiting operations to extreme or emergency situations. Under the operative DWR contract, the Units may dispatch only when called upon by the State to respond to emergency energy events or for training, reliability testing, or compliance testing. The Units do not and cannot dispatch unless directed or approved by the California Independent System Operator ("CAISO") and approved by DWR. For CAISO dispatch, AES does not control when the Units are dispatched, how long they operate, or the load at which they operate; those matters are directed by CAISO.

5. As of the date of this Declaration, the final compliance date of the State's OTC Deadline for the Units at the Alamitos Generating Station is December 31, 2026, which is also the expiration date of the DWR contract for these Units. The Units must remain operational and available through the end of 2026 per the DWR contract in the event they are needed for emergency or related events.

6. It is possible, however, that the state or the federal government may direct AES to keep the Units on standby for emergency or grid reliability purposes past 2026. For example, the state may order an extension of the DWR's contract for the Units past December 31, 2026. Alternatively, the federal government may direct AES to keep the Units operational through an order from the Department of Energy ("DOE") under Section 202(c) of the Federal Power Act. In recent years, this authority has been used to delay the retirement of certain electricity generating plants and require them to remain available for reliability purposes, often through renewable 90-day emergency orders. If the Units are deemed necessary to remain operational, AES believes that a regulatory order, or an indication that such order is to be issued, would likely occur by April 1, 2027.

7. There is no need to perform a source test if the Units are not ordered to be dispatched on or after December 31, 2026. If AES were to otherwise perform a source test, it would be starting up the Units, burning natural gas, and creating emissions for no reason other

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than to test equipment that may never be dispatched again. In brief, a source test is only necessary if the Units are ordered for the dispatch of electricity on or after December 31, 2026, and such an order is wholly outside of AES's control. DWR has requested that AES seek this Petition for a variance to avoid needlessly operating the legacy Units in order to perform source test requirements. AES is seeking to avoid a scenario in which it is required to come back online solely for the purpose of performing a source test. AES seeks to condition a source test on an order extending the permitting life of the Units or requiring the Units to come back online, in which case AES will perform source testing requirements as set forth in proposed conditions agreed upon with the District.

8. This declaration provides the factual basis in support of the variance petition. In addition, this declaration describes the operation of Units 3 and 4 during the early October 2026 dispatch directed by CAISO, which took place after the Petition was filed.

II. BASIS FOR GRANTING VARIANCE

9. If AES does not complete a source test for Units 3 and 4 by December 31, 2026, it will be in violation of District Rules 203(b), 1135(e)(10), 1303(a)(1), 2004(f)(1), 2012, 3002(c), and 3004(a)(4); Permit Conditions D28.2, D28.5, and K40.2; Administrative Conditions, Sections E.2 and F.4 of its Title V Permit; and Administrative Condition, Section F(II)(1) of its RECLAIM Permit.

10. Performing the required source testing for each Unit would require the Unit to be online and combust natural gas for approximately 24 hours each time. The total cost associated with each testing event including contractor labor, carbon credits, fuel cost, and other variable operating cost is approximately $110,000 per unit. This would be a significant financial burden related to equipment that is unlikely to be used. The cost of running the Units for source testing would impose an undue burden on AES and would produce unnecessary emissions with no corresponding benefit to AES or the public.

11. Whether the Units are ordered to dispatch on or after December 31, 2026, and therefore require source testing, is beyond the reasonable control of AES. The decision as to

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whether the Units must remain operational after December 31, 2026, and whether they will dispatch after this date, is entirely within the discretion of the state and/or federal government.

12. AES cannot curtail operations in lieu of obtaining a variance. AES needs to remain operational and grid-ready in the event its Units are ordered to be dispatched and therefore, the termination of operations prior to January 1, 2027 is not possible. Further, even if AES terminated operations, should the Units be ordered back online, a violation would date back to December 31, 2026. Therefore, curtailment or termination of operations will not obviate the need for a variance.

13. During the period the variance is in effect, there will be no excess emissions. The purpose of the variance is to avoid running the equipment for a source test, which would generate emissions. If the variance is granted, emissions that otherwise would have been generated will be avoided.

14. During the period the variance is in effect, AES will monitor emission levels from the Units. Fuel use records (e.g., utility gas bills) for the Units will be monitored and maintained onsite. If required, CEMS for NOx emissions monitoring will be maintained during the variance period.

15. AES will also operate under the conditions set forth in the Order for Variance. Operation under the Order is not expected to result in a violation of Health and Safety (H&S) Code Section 41700 or AQMD Rule 402 (nuisance).

III. THE EARLY OCTOBER 2026 EMERGENCY GENERATION EVENT

16. After the Petition was filed on September 4, 2026, CAISO ordered the Units to dispatch electricity in early October 2026 in response to a regional extreme emergency heat event affecting transmission. A source test could not be performed during this event for the reasons set forth below.

A. Applicable Regulatory Requirements

i. *Source Testing Requirements*

17. The source tests at issue under the Petition are: (a) the annual carbon monoxide ("CO") source test required by Permit Condition D28.2 for Boilers No. 3 and No. 4 (Device IDs D45 and D48); (b) the annual ammonia slip source test required by Permit Condition D28.5 for

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the selective catalytic reduction units serving Boilers No. 3 and No. 4 (Device IDs C139 and C141); and (c) the nitrogen oxide ("NOx") relative accuracy test audit ("RATA") required under AQMD Rule 2012 and Section F of the Facility Permit. Permit Condition K40.2 establishes the associated source test report requirements.

18. These source tests cannot be performed on a unit that is not operating, and, consistent with standard practice and protocols, they are only performed under certain operating conditions and generating loads. Permit Condition D28.2 requires that the CO test "be conducted when the equipment is operating under normal conditions." Permit Condition D28.5 requires that the ammonia slip test be conducted during ammonia injection periods, using AQMD Method 207.1 measured over a 60-minute averaging period, with the NOx concentration simultaneously recorded, and requires that the District "be notified of the date and time of the test at least 7 days prior to the test." The NOx RATA must be conducted in compliance with an AQMD-approved source test protocol (Rule 2012, Appendix A), which requires steady and representative combustion of fuel for a period necessary to complete at least nine valid test runs on the NOx concentration monitor. Permit Condition K40.2 requires that source test results report the generator power output (MW) under which the test was conducted.

19. As a practical matter, performing these tests on a Unit requires the Unit to be online and combusting natural gas for at least 24 hours. For example, the testing itself requires a stable, fixed-load operating window of approximately six-to-ten hours, during which the Unit must hold a steady, representative load while the test contractor completes the required runs and averaging periods. Without these conditions, a source test would not be representative of standard operation of the Units as they have been operated in the past. The tests also require advance scheduling of a third-party source testing contractor, which is typically arranged three to six months in advance, as well as advance notification to the District.

20. A CO source test also requires the unit to be operated at a load representative of normal conditions. For these Units, which have a nameplate capacity of 320 MW each, the generation load historically used to conduct representative source testing and reported pursuant to Permit Condition K40.2 for prior years, has been approximately 110 to 130 MW.

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ii. *NPDES Permit*

21. The Facility's OTC discharges are governed by Water Quality Order No. R4-2020-0134 (NPDES No. CA0001139), issued by the California Regional Water Quality Control Board, Los Angeles Region ("Water Board"). The Order is attached as **Exhibit A**. Section 4.1 and Table 5 of that Order, at page 6, establish an instantaneous maximum effluent temperature limitation of 86°F at Discharge Points 002 and 003, with compliance measured at Monitoring Locations EFF-002 and EFF-003. The Order further provides in footnote c to Table 5 that "the maximum temperature of the effluent shall not exceed the natural temperature of the receiving waters by more than 20°F." Receiving Water Limitation Section 5.1.2 also dictates that "[a]t no time shall the temperature be raised above 86º F as a result of waste discharged."

22. Units 3 and 4 discharge through Outfall 002. Unit 5 (not subject to this Petition) discharges through Outfall 003.

23. Further, Attachment D, Section 1.2 of the Order provides: "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 CFR § 122.41(c).)"

24. Time Schedule Order No. R4-2023-0371 (the "TSO") issued by the Water Board previously authorized a higher interim effluent temperature limitation of 103°F at Discharge Points 002 and 003. That interim limitation was deemed effective only from January 1, 2024 through December 31, 2025, and applied only during the May 1 through October 31 period and only during operation of the OTC units during extreme weather events or as otherwise required to participate in the Strategic Reserve program. The TSO expired on December 31, 2025 and was not extended pursuant to California Water Code Section 13385(j)(3)(C), which limits a TSO compliance schedule to 10 years. The original Water Board Order the TSO applied to was adopted in 2015.

25. Source testing for the Units in 2025 was completed on October 21-22, 2025, during the term of the TSO authorizing a higher effluent temperature limit of 103°F. The interim

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limit was no longer available in October 2026, and the final 86°F effluent temperature limit applied to the early October 2026 dispatch.

iii. *OTC Policy*

26. As noted above, under the operative DWR contract, dispatch of the Units for generation is fully controlled and directed by CAISO. All operation of the Units must be directed or approved by CAISO, including dispatch, the operating load, and shut down of the Units. AES is not permitted to take any action during an emergency generation event that would jeopardize production, including conducting source testing. Source testing must be scheduled with DWR and CAISO so that it does not occur during ordered electrical dispatch. AES must receive explicit permission from DWR and CAISO before performing source testing during non-CAISO dispatch generation periods.

B. The CAISO Dispatch

27. In response to a regional extreme emergency heat event affecting transmission, in early October 2026, CAISO instructed AES to initiate startup procedures for the three OTC generating units at the Facility, including Units 3 and 4. The dispatch instruction came on short notice, as is inherent in an emergency grid event, and AES had no advance ability to plan, schedule, or notice source testing around it.

28. Unit 3 began startup combustion on October 3, 2026 at approximately 20:01 and remained in operation through October 8, 2026 at 22:41, a period of approximately five days. During that period, Unit 3 operated at an average load of approximately 41 MW, with a maximum load of 80 MW sustained for one hour, and generated approximately 367 pounds of NOx emissions.

29. Unit 4 began startup combustion on October 3, 2026 at 21:38 and operated through October 4, 2026 at 05:49, a period of approximately eight hours. Unit 4 did not generate electricity during that period; it operated at zero MW. Unit 4 generated approximately 124 pounds of NOx emissions.

30. Throughout the dispatch, CAISO directed AES to operate at different loads, which changed over the course of the event.

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C. Source Testing Could Not Be Performed During the Dispatch

31. Source testing of Units 3 and 4 could not be performed during the early October 2026 dispatch for multiple reasons:

32. First, the changing loads directed by CAISO did not provide the six-to-ten-hour stable, fixed-load conditions required to complete all of the tests under historically representative conditions. At no point during the dispatch did either Unit hold a steady, representative load for the period necessary to complete a test per standard protocols.

33. In addition, the load at which the Units actually operated during the dispatch was far below the load required for a representative test based on past, normal operating conditions. Unit 3 reached 80 MW only briefly, well below both its 320 MW nameplate capacity and the approximately 110 to 130 MW load historically used for representative source testing. Unit 4 operated at zero MW and therefore could not have been tested at all.

34. Operating conditions during the October 2026 generation event were constrained by the Facility's NPDES permit. The temperature of the Facility's OTC discharge is a direct function of the heat released by the operating Units, which in turn increases with generation load. The ability to operate the Units at a given load is therefore constrained by the intake water temperature and effluent temperature limitation at the receiving outfall.

35. The October 2026 generation event was the first CAISO dispatch of the Units subject to the 86°F temperature limits, as opposed to the previous 103°F limit under the TSO. Unit 3 was required to operate at a lower load in order to keep the EFF-002 temperature within the permit limit.

36. On October 5, 2026, the EFF-002 discharge temperature briefly exceeded the 86°F permit limit, even while operating at a reduced load.

37. On October 8, 2026, a second, brief exceedance of the 86°F limit occurred at EFF-002 in connection with efforts to bring Unit 4 online. Because of the outfall temperature limitation, AES could not bring Unit 4 online.

38. Notably, intake water temperatures during this period were between 74-77°F (as opposed to a historic seasonal norm closer to 64-66°F), leaving roughly 10°F of thermal

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headroom beneath the 86°F cap, in contrast with the permitted 20°F difference between the natural temperature of the receiving waters and the effluent.

39. Accordingly, the generation load that would have been necessary to conduct representative source testing was constrained by the NPDES effluent temperature limitation. Unit 3 could not be loaded to a representative testing load without risking further exceedances of the 86°F limit at EFF-002, and Unit 4 could not operate at load at all because the EFF-002 temperature was already at or near the permit limit as a result of Unit 3's operations.

40. As noted above, Attachment D, Section 1.2 of the Order provides: "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 CFR § 122.41(c).)" Thus, AES was obligated to hold Unit 3 at a reduced load rather than increase the load to a level that would have permitted representative source testing.

41. The timing of the dispatch also made compliance with the testing prerequisites impossible. The dispatch was directed by CAISO in response to an emergency heat event with little or no advance warning, and AES could not have provided the District with the seven days' advance notice of the date and time of the ammonia slip test required by Permit Condition D28.5, or otherwise arranged in advance for a source test contractor to be present, for an operating window that AES did not know would occur and did not control.

42. Finally, even if all the conditions above had not precluded source testing, AES is prohibited from taking any action that would jeopardize generation during an emergency power event, including source testing.

D. <u>Source Testing Is Being Planned in the Event the Units Are to Remain Operational</u>

43. Per CAISO directives, Unit 3 was shut down late in the evening of October 8, 2026 and the Units have not been dispatched since that time. The Units have not come back online to avoid the need to restart simply for the purpose of source testing.

44. In order to plan for a scenario in which the Units' operational life is extended, AES is proactively working with source test contractors and plans to also engage DWR for

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contingent approval so that if the Units are extended, a streamlined process will be available to perform source testing. If source testing is required, based on historical experience, it is likely that AES will be able to perform a source test under normal operating conditions during the cooler season, when greater thermal headroom is available while maintaining compliance with the facility's 86°F NPDES effluent temperature limit.

IV. CONCLUSION

45. As set forth above, AES is seeking a Regular Variance avoid needlessly generating emissions and incurring expenses associated with performing source testing on equipment that may never be operated again, with source testing instead made contingent on an order from the state or federal government to dispatch or to remain operational, on the terms set forth in the Proposed Order and its conditions.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this 29th day of October 2026 at Long Beach, California.

Jose Perez – Director of Operations
Petitioner
AES ALAMITOS, LLC

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EXHIBIT A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
320 W. 4th Street, Suite 200, Los Angeles, California 90013

Phone (213) 576-6600 • (213) 576-6640
Los Angeles Regional Water Quality Control Board
(http://www.waterboards.ca.gov/losangeles)

WATER QUALITY ORDER R4-2020-0134
NPDES NUMBER CA0001139, CI NUMBER 6113

WASTE DISCHARGE REQUIREMENTS
FOR THE AES ALAMITOS LLC, ALAMITOS GENERATING STATION

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

Table 1. Discharger Information

Discharger:	**AES Alamitos LLC**
Name of Facility:	**Alamitos Generating Station**
Facility Address:	**690 N. Studebaker Road** **Long Beach, CA 90803** **Los Angeles County**

Table 2. Discharge Locations for the San Gabriel River Estuary

Discharge Point	Discharge Point Latitude (North)	Discharge Point Longitude (West)
002	33.770000° N	-118.097222º W
003	33.764762° N	-118.097222º W

Table 3. Discharge Locations for Storm Water Runoff to the Los Cerritos Channel

Discharge Point	Discharge Point Latitude (North)	Discharge Point Longitude (West)
O-48	33.768394° N	-118.100725º W
O-84	33.765078° N	-118.100347º W

Table 4. Administrative Information

This Order was adopted on:	**November 12, 2020**
This Order shall become effective on:	**January 1, 2021**
This Order shall expire on:	**December 31, 2025**
The Discharger shall file a Report of Waste Discharger as an application for reissuance of WDRs 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 United States Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) have classified this discharge as follows:	Major discharge

I, Renee Purdy, 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 November 12, 2020.

R Purdy Digitally signed by R Purdy Date: 2020.11.22 06:11:57 -08'00'

Renee Purdy, Executive Officer

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1. FACILITY INFORMATION

Information describing the Alamitos Generating Station (Facility) is summarized on the cover page and in sections 1 and 2 of the Fact Sheet (Attachment F). Section 1 of the Fact Sheet also includes information regarding the Facility's permit application.

2. FINDINGS

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

2.1. **Legal Authorities.** This Order serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the 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 United States Environmental Protection Agency (U.S. EPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Discharger to discharge into waters of the United States at the discharge locations described in Tables 2 and 3 subject to the WDRs in this Order.

2.2. **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 are also incorporated into this Order.

2.3. **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.

2.5. **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 this Order supersedes Order Number R4-2015-0173 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 shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for violations of the previous Order.

3. DISCHARGE PROHIBITIONS

3.1. Wastes discharged shall be limited to a maximum of 729 million gallons per day (MGD) of commingled wastewater (consisting of once-through cooling water and low volume wastewater) from Discharge Points 002 and 003.

3.2. The discharge of wastewater at a location other than specifically described in this Order is prohibited and constitutes a violation of the Order. The discharge of wastes from accidental spills or other sources is prohibited.

3.3. 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 San Gabriel River Estuary, the Los Cerritos Channel Estuary, or other waters of the United States, are prohibited.

3.4. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or a nuisance as defined by section 13050 of the Water Code.

3.5. Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.

3.6. The discharge shall not cause or contribute to 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.

3.7. Discharge of oil or any residuary product of petroleum to waters of the State, except in accordance with this Order or other provisions of division 7 of the Water Code, is prohibited.

3.8. The discharge of any radiological, chemical, or biological warfare agent into the waters of the state is prohibited under Water Code section 13375.

3.9. The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream that may ultimately be released to waters of the United States, is prohibited unless specifically authorized elsewhere in this Order or another NPDES permit. This requirement is not applicable to products used for lawn and agricultural purposes.

3.10. 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 Order.

3.11. 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.

3.12. The discharge of any in-plant waste streams from the Facility, specifically including the discharge of low volume wastes, is prohibited unless coincident with circulating water pump flows related to power generation or critical maintenance. This prohibition is effective until the Facility achieves final compliance with the Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (OTC Policy), prior to which the terms and provisions of this Order shall be reconsidered to account for the change of operation at the Facility.

3.13. The discharge of PCBs is prohibited based on the standards applicable to steam-electric generating facilities contained in 40 CFR part 423.

4. EFFLUENT LIMITATIONS

4.1. Effluent Limitations – Discharge Points 002 and 003

The Discharger shall maintain compliance with the following effluent limitations at Discharge Points 002 and 003, with compliance measured at Monitoring Locations EFF-002 and EFF-003 as described in the Monitoring and Reporting Program (MRP), Attachment E.

Table 5. Effluent Limitations at Discharge Points 002 and 003

Parameter	Units (Note a)	Average Monthly	Maximum Daily	Instantaneous Minimum/ Maximum
pH	standard units	---	---	6.5 / 8.5
Free Available Chlorine (Note b)	mg/L	---	0.2	--- / 0.5
Total Residual Chlorine (Notes b and k)	mg/L	---	0.1	---
Temperature (Note c)	ºF	---	---	--- /86
Enterococci (Note d)	cfu/100 mL	---	---	---
Radioactivity (Note e)	---	---	---	---
Chronic Toxicity (Notes f and g)	Pass/Fail, % Effect	Pass	Pass or % Effect <50	---
Ammonia, Total (as N)	mg/L	0.49	1.1	---
Copper, Total Recoverable, Dry Weather (Notes h and k)	µg/L	2.0	5.7	---
Copper, Total Recoverable, Dry Weather (Discharge Point 002) (Notes h and k)	lbs/day	6.5	19	---
Copper, Total Recoverable, Dry Weather (Discharge Point 003) (Notes h and k)	lbs/day	5.6	16	---
Copper, Total Recoverable, Wet Weather (Notes I and k)	µg/L	---	6.9	---
Copper, Total Recoverable, Wet Weather (Discharge Point 002) (Notes I and k)	lbs/day	---	22	---
Copper, Total Recoverable, Wet Weather (Discharge Point 003) (Notes I and k)	lbs/day	---	19	---
Mercury (Note j)	µg/L	0.012	---	---
Nickel, Total Recoverable (Note k)	µg/L	4.5	14	---
Nickel, Total Recoverable (Discharge Point 002) (Note k)	lbs/day	15	46	---
Nickel, Total Recoverable (Discharge Point 003) (Note k)	lbs/day	13	39	---
Bis(2-Ethylhexyl) Phthalate (Note k)	µg/L	5.9	18	---

Parameter	Units (Note a)	Average Monthly	Maximum Daily	Instantaneous Minimum/ Maximum
Bis(2-Ethylhexyl) Phthalate (Discharge Point 002) (Note k)	lbs/day	19	59	---
Bis(2-Ethylhexyl) Phthalate (Discharge Point 003) (Note k)	lbs/day	17	51	---

Footnotes for Table 5

a. The mass limitations are based on a maximum flow of 392 MGD at Discharge Point 002 and 337 MGD at Discharge Point 002 and are calculated as follows:

Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day

b. Total residual and free available chlorine may not be discharged from any single generating unit for more than two hours per day unless the Discharger demonstrates to the permitting authority that discharge for more than two hours per day is required for macroinvertebrate control. The MDEL for free available chlorine is applied as a daily average.

c. For temperature, the maximum temperature of the effluent shall not exceed the natural temperature of the receiving waters by more than 20°F.

d. The bacteria water quality objective for all waters where the salinity is greater than 1 part per thousand (ppth) more than 5 percent of the time during the calendar year is: a six-week rolling geometric mean of *enterococci* not to exceed 30 colony forming units (cfu) per 100 milliliters (mL), or 100 most probable number (mpn) per 100 mL, calculated weekly; and a statistical threshold value (STV) of 110 cfu/100 mL, or 110 mpn/100 mL, not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.

e. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

f. Report “Pass” or “Fail” for Median Monthly Effluent Limitation (MMEL). Report “Pass” or “Fail” and “% Effect” for Maximum Daily Effluent Limitation (MDEL).

g. The average monthly is a Median Monthly Effluent Limitation (MMEL), and the MMEL shall be reported as “Pass” or “Fail.” The Maximum Daily Effluent Limitation (MDEL) shall be reported as “Pass” or “Fail” and “% Effect.” The MMEL for chronic toxicity shall only apply when there is a discharge on more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests may be conducted when one toxicity test results in “Fail”.

h. Dry weather is assumed for any discharge that occurs when the flow is less than 156 cubic feet per second (101 MGD) as measured at flow gauge F354-R in Coyote Creek operated by the Los Angeles County Department of Public Works.

i. Wet weather is assumed for any discharge that occurs when the flow is equal to or greater than 156 cubic feet per second (101 MGD) as measured at flow gauge F354-R in Coyote Creek operated by the Los Angeles County Department of Public Works.

j. The effluent limitation for mercury is applied as an annual average of the total mercury concentration in a calendar year.

k. A Time Schedule Order (Order No. R4-2020-0135 has been issued that includes an interim limit for this pollutant that is effective until December 31, 2023.

End of Footnotes for Table 5

4.2. Effluent Limitations – Discharge Point INT-001A (Low Volume Wastes)

Table 6. Effluent Limitations for Low Volume Wastes

Pollutant	Units	AMEL	MDEL	Minimum	Maximum
TSS	mg/l	30	100	---	---
Oil and grease	mg/l	15	20	---	---
pH	s.u.	---	---	6.0	9.0

4.3. Effluent Limitations – Discharge Points O-48 and O-84 (Storm Water)

Table 7. Effluent Limitations for Storm Water

Pollutant	Units	MDEL	Minimum	Maximum
pH	s.u.	---	6.5	8.5
Temperature	ºF	---	---	86
TSS	mg/l	75	---	---
Oil and grease	mg/l	15	---	---

4.4. Land Discharge Specifications—Not Applicable

4.5. Recycling Specifications—Not Applicable

5. RECEIVING WATER LIMITATIONS

5.1. Surface Water Limitations

5.1.1. The pH of the receiving water 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 0.2 units from natural conditions as a result of waste discharge. Natural conditions shall be determined on a case-by-case basis.

5.1.2. Elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses. At no time shall the temperature be raised above 86º F as a result of waste discharged.

5.1.3. Water Contact Recreation Standards

Geometric Mean Limit

a. *Enterococcus* density shall not exceed 30 colony-forming units (cfu)/100 mL or 30 most probable number (mpn/100mL).

Statistical Threshold Value (STV) Limit

b. *Enterococcus* density shall not exceed 110 cfu/100 mL or 110 most probable number (mpn/100mL).

The waterbody Geometric Mean shall not be greater than the applicable Geometric Mean Limit in any six-week interval, calculated weekly. The

applicable STV shall not be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.

5.1.4. The mean annual dissolved oxygen concentration shall be greater than 7.0 mg/L. No single determination of dissolved oxygen shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations.

Further, the discharge shall not cause the following in the San Gabriel River Estuary or Los Cerritos Channel Estuary:

5.1.5. Exceedance of the total ammonia (as N) concentrations specified in Chapter 3 of the Basin Plan. For inland surface waters not characteristic of freshwater, the four-day average concentration of un-ionized ammonia shall not exceed 0.035 mg/L and the one-hour average concentration shall not exceed 0.233 mg/L.

5.1.6. The presence of visible, floating, suspended or deposited macroscopic particulate matter or foam.

5.1.7. Increases in turbidity greater than 20%, where natural turbidity is between 0 to 50 NTU. Where natural turbidity is greater than 50 NTU, increases in turbidity shall not exceed 10%.

5.1.8. 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.

5.1.9. Suspended or settleable materials, chemical substances, or pesticides in amounts that cause nuisance or adversely affect any designated beneficial use.

5.1.10. 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.

5.1.11. Accumulation of bottom deposits or aquatic growths.

5.1.12. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

5.1.13. The presence of substances that result in increases of BOD that adversely affect beneficial uses.

5.1.14. 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.

5.1.15. Alteration of turbidity, or apparent color beyond present natural background levels.

5.1.16. Damage, discoloration, or the formation of sludge deposits on flood control structures or facilities, or overloading of the design capacity.

5.1.17. Degradation of surface water communities and populations including vertebrate, invertebrate, and plant species.

5.1.18. Problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.

5.1.19. Nuisance, or adverse effects on beneficial uses of the receiving water.

5.1.20. Violation of any applicable water quality standard 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 the CWA, or amendments thereto, the Regional Water Board will revise or modify this Order in accordance with such standards.

5.2. Groundwater Limitations—Not Applicable

6. PROVISIONS

6.1. Standard Provisions

6.1.1. The Discharger shall comply with all Standard Provisions included in Attachment D.

6.1.2. 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:

6.1.2.1. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of wastewater and 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.

6.1.2.2. 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.

6.1.2.3. 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.

6.1.2.4. 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.

6.1.2.5. A copy of these waste discharge requirements shall be maintained at the discharge facility so as to be available at all times to operating personnel.

6.1.2.6. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

a. Violation of any term or condition contained in this Order;
b. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;
c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

6.1.2.7. If there is any storage of hazardous or toxic materials or hydrocarbons at this Facility and if the Facility is not staffed at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

6.1.2.8. The Discharger shall file with the Regional Water Board a report of waste discharge at least 180 days before making any material change or proposed change in the character, location, or volume of the discharge.

6.1.2.9. 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 30 days prior to taking effect 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.

6.1.2.10. Violation of any of the provisions of this Order may subject the violator to any of the civil liability or penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of liability or penalty may be applied for each kind of violation.

6.1.2.11. 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:

a. Name and general composition of the chemical,
b. Frequency of use,
c. Quantities to be used,
d. Proposed discharge concentrations, and
e. U.S. EPA registration number, if applicable.

6.1.2.12. 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, civil or 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.

6.1.2.13. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, 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.

6.1.2.14. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

6.2. Monitoring and Reporting Program (MRP) Requirements

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

6.3. Special Provisions

6.3.1. **Reopener Provisions**

6.3.1.1. 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.

6.3.1.2. 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.

6.3.1.3. This Order may be reopened and modified, in accordance with the provisions set forth in 40 CFR parts 122 and 124, to include requirements for the implementation of the watershed management approach or to include new MLs.

6.3.1.4. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments, such as an update of a water quality objective or the adoption or revision of a TMDL for the San Gabriel River Estuary, Los Cerritos Channel Estuary, or tributaries thereto.

6.3.1.5. 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.

6.3.1.6. 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.

6.3.1.7. This Order may also be reopened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR; 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; or acquisition of newly-obtained information which would have justified the application of different conditions if known at the time of Order adoption.

6.3.1.7. This Order may also be reopened and modified in accordance with any updates to the final compliance date for the Facility in the OTC Policy and amendments thereto, as set forth in Section 6.3.6.

6.3.2. **Special Studies, Technical Papers and Additional Monitoring Requirements**

6.3.2.1. **Updated Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan.** The Discharger shall submit to the Regional Water Board an updated 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 5.2. of the Monitoring and Reporting Program (Attachment E) for an overview of TRE requirements.

6.3.2.2. **Updated Spill Contingency Plan (SCP).** The Discharger shall submit to the Regional Water Board, within 90 days of the effective date of this Order, an updated SCP that includes 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.

The SCP shall cover all areas of the Facility that might impact the discharge at Discharge Points O-48 and O-84. The Discharger shall describe the activities in each of these areas, the potential for contamination of wastewater and the discharge of hazardous waste/material and address the feasibility of contaminant and/or treatment of wastewater. The SCP shall be reviewed at a minimum once per year and updated as needed.

6.3.2.3. **Updated Storm Water Pollution Prevention Plan (SWPPP).** The Discharger shall submit to the Regional Water Board, within 90 days of the effective date of this Order, an updated SWPPP that meets the requirements found in Attachment G. The CCGT construction is complete and that part of the Facility is permitted under the Industrial General Permit and maintains a separate SWPPP. Current construction for the battery energy storage and any future construction (e.g. CCGTs) will be conducted under the construction general permit and be managed under a separate SWPPP.

6.3.3. **Best Management Practices and Pollution Prevention (BMPP).** The Discharger shall submit to the Regional Water Board, within 90 days of the effective date of this Order, an updated BMPP that will be implemented to reduce the discharge of pollutants to the receiving water. The BMPP may be included

within the SWPPP as a description of best management practices (BMPs). Attachment G provides information regarding the description of BMPs. The BMPP shall include site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the state. Further, the Discharger shall assure that the storm water discharges from the Facility would neither cause, nor contribute to the exceedance of water quality standards and objectives, nor create conditions of nuisance in the receiving water, and that any potential 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 discharge to surface waters.

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

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

6.3.4.2. **Climate Change Effects Vulnerability Assessment and Mitigation Plan**: The Permittee shall consider the impacts of climate change as it affects the operation of the treatment facility due to flooding, wildfire, sea level rise, or other climate-related changes. The Permittee shall develop a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) to assess and manage climate change related effects associated with facility operation, water quality and beneficial uses. The Climate Change Plan is due if and when a ROWD is submitted for permit renewal.

6.3.5. **Special Provisions for Publicly-Owned Treatment Works (POTWs)—Not Applicable**

6.3.6. **Other Special Provisions—Once-Through Cooling Water Compliance Schedule**

The Discharger submitted an implementation plan for compliance with the OTC Policy on April 1, 2011 and revised it on June 17, 2011. Additional implementation information was requested and submitted on March 31, 2013 and November 8, 2013. Per its revised implementation plan, and subsequent information, the Discharger has proposed to bring the Facility into compliance using Track 1.

The Track 1 compliance consists of the construction of dry-cooled natural gas fired combined cycle gas turbine (CCGT) power blocks. On December 31, 2019, the Discharger permanently shut down Units 1, 2 and 6 and disabled the power supply to the circulation pumps. The Facility constructed two dry-cooled natural gas fired combined cycle gas turbine (CCGT) power blocks to replace the retired units. These units began commercial operation on February 6, 2020. A battery energy storage system is currently under construction at the Facility. Four simple-cycle gas turbine units are currently licensed with the California Energy Commission but have not yet begun construction. The OTC Policy established a

Final Compliance Date of December 31, 2020 to permanently shut down Units 3, 4 and 5.

On September 1, 2020, the State Water Board adopted an amendment to the OTC Policy that established a Final Compliance Date for the Discharger of December 31, 2023. Therefore, the Discharger shall achieve full compliance with the OTC Policy by permanently shutting down Units 3, 4 and 5 by the Final Compliance Date, unless the Final Compliance Date for the Facility established in Section 3.E, Table 1 of the OTC Policy, or any later date established in accordance with the Final Compliance Date suspension provisions in Section 2.B(2) of the OTC Policy.

6.3.7. **Compliance Schedules—Not Applicable**

7. COMPLIANCE DETERMINATION

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

7.1. 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 (ML) (see Reporting Requirement 8.7. of the MRP), then the Discharger is out of compliance.

7.2. 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, constituents reported as ND or DNQ are treated as having concentrations equal to zero, provided that the applicable ML is used.

7.3. 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

7.3.1. If the number of measurements (n) is odd, then the median will be calculated as = $X_{(n+1)/2}$, or

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

7.4. 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:

7.4.1. 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.

7.3.2. 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.

7.5. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsections 7.2. and 7.4. 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 for the purpose of calculating mandatory minimum penalties; though the Discharger will 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) for the purpose of calculating discretionary administrative civil liabilities. However, an alleged violation of the AMEL will be considered one violation for the purpose of assessing mandatory minimum penalties. 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. If multiple samples are taken the Discharger will only be considered out of compliance for days when the discharge occurs. For anyone calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

7.5.1. 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 the month for that parameter.

7.5.2. If the analytical result of a single sample monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any constituent, the Discharger shall collect four additional samples at approximately equal intervals during the same calendar month. 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.

When all sample results are greater than or equal to the reported ML (see Reporting Requirement 1.1. 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 1.1. 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 ND or DNQ, the median shall be the lower of the two middle values.

7.5.3. 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.

7.5.4. 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.

7.6. 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 one day only within the reporting period. For any one day during which no sample is taken, no compliance determination will be made for that day.

7.7. 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).

7.8. 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).

7.9. 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 an effluent violation, but compliance determination can be made for that month with respect to reporting violations.

7.10. Chronic Toxicity

The discharge is subject to determination of "Pass" or "Fail" and "Percent Effect" from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test 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, Table A-1, and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is: Mean discharge In-stream Waste Concentration (IWC) response ≤0.75 × 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: ((Mean control response - Mean discharge IWC response) ÷ Mean control response)) × 100. This is a t-test (formally Student's t-Test), a statistical analysis comparing two sets of replicate observations - in the case of Whole Effluent Toxicity (WET), only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is "Pass" or "Fail")). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances.

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 approach, results in "Fail" and the "Percent Effect" is ≥ 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 approach—results in "Fail". The MMEL for chronic toxicity shall only apply when there is a discharge on more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests may be conducted when one toxicity test results in "Fail."

The chronic toxicity MDEL and MMEL are set at the IWC for the discharge (100% effluent) and expressed in units of the TST statistical approach ("Pass" or "Fail", "Percent Effect"). All NPDES effluent compliance monitoring for the chronic toxicity MDEL and MMEL shall be reported using only the 100% effluent concentration and negative control, expressed in units of the TST. The TST hypothesis (Ho) (see above) is statistically analyzed using the IWC and a negative control. Effluent toxicity tests shall be run using a multi-concentration test design when required by *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA 2002, EPA-821-R-02-013). The Regional Water Board's review of reported toxicity test results will include review of concentration-response patterns as appropriate (see Fact Sheet discussion at 4.3.6.). As described in the bioassay laboratory audit correspondence from the State Water Resources Control Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the No Observable Effect Concentration (NOEC) and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. Standard Operating

Procedures used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach, including those that incorporate a consideration of concentration-response patterns, must be submitted to the Regional Water Board (40 CFR section 122.41(h)). The Regional Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Permittee, the USEPA, the State Water Board's Quality Assurance Officer, or the State Water Board's Environmental Laboratory Accreditation Program (ELAP) as needed. The Board may consider the results of any TIE/TRE studies in an enforcement action.

7.11. 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.

7.12. Bacterial Standards and Analyses

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

$$\text{Geometric Mean} = (C1 \times C2 \times \ldots \times Cn)^{1/n}$$

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, fecal and *E. coli*) and *Enterococcus* shall be those presented in Table 1A of 40 CFR section 136 (revised August 28, 2017), unless alternate methods have been approved by U.S. EPA pursuant to part 136 or improved methods have been determined by the Executive Officer and/or U.S. EPA.

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)
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:

$$\text{Arithmetic mean } (\mu) = \frac{\Sigma x}{n}$$

where: Σx 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.

Best Management Practices (BMPs)
BMPs are methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges including storm water. BMPs include structural and non-structural controls, and operation maintenance procedures, which can be applied before, during, and/or after pollution-producing activities.

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.

EC25
EC25 is a point estimate of the toxicant concentration that would cause an observable adverse effect (e.g., death, immobilization, or serious incapacitation) in 25 percent of the test organisms.

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 wasteload 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.

Existing Discharger
Any discharger that is not a new discharger. An existing discharger includes an "increasing discharger" (i.e., any existing facility with treatment systems in place for its current discharge that is or will be expanding, upgrading, or modifying its permitted discharge after the effective date of this Order).

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:

$$\text{median} = \frac{X_{(n+1)}}{2}$$

If n is even, then:

$$\text{median} = \frac{X_{\frac{n}{2}} + X_{\frac{n}{2}+1}}{2}$$

(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 reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 Code of Federal Regulations (CFR). part 136, Attachment B.

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.

PCBs (polychlorinated biphenyls)
USEPA method 608, reported as arochlor results, is required for monitoring data that will be used for assessing compliance with WQBELs (if applicable). PCBs as aroclors shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

USEPA proposed method 1668c, reported as 44 congener results, is requested for informational purposes to help assess concentrations in the receiving water. To facilitate interpretation of sediment/fish tissue data for TMDL development, PCB congeners whose analytical characteristics resemble those of PCB-8, 18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 195, 201, 206 and 209 shall be reported as a sum and individually quantified (or quantified as mixtures of isomers of a single congener in co-elutions as appropriate).

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 MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs 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.

Significant Storm Event
A continuous discharge of storm water for a minimum of one hour, or the intermittent discharge of storm for a minimum of three hours in a 12-hour period.

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

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

$$\text{Standard Deviation } (\sigma) = \frac{\Sigma(X-\mu)^2}{(n-1)^{0.5}}$$

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

Thermal Waste
Cooling water and industrial process water used for the purpose of transporting waste heat.

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.)

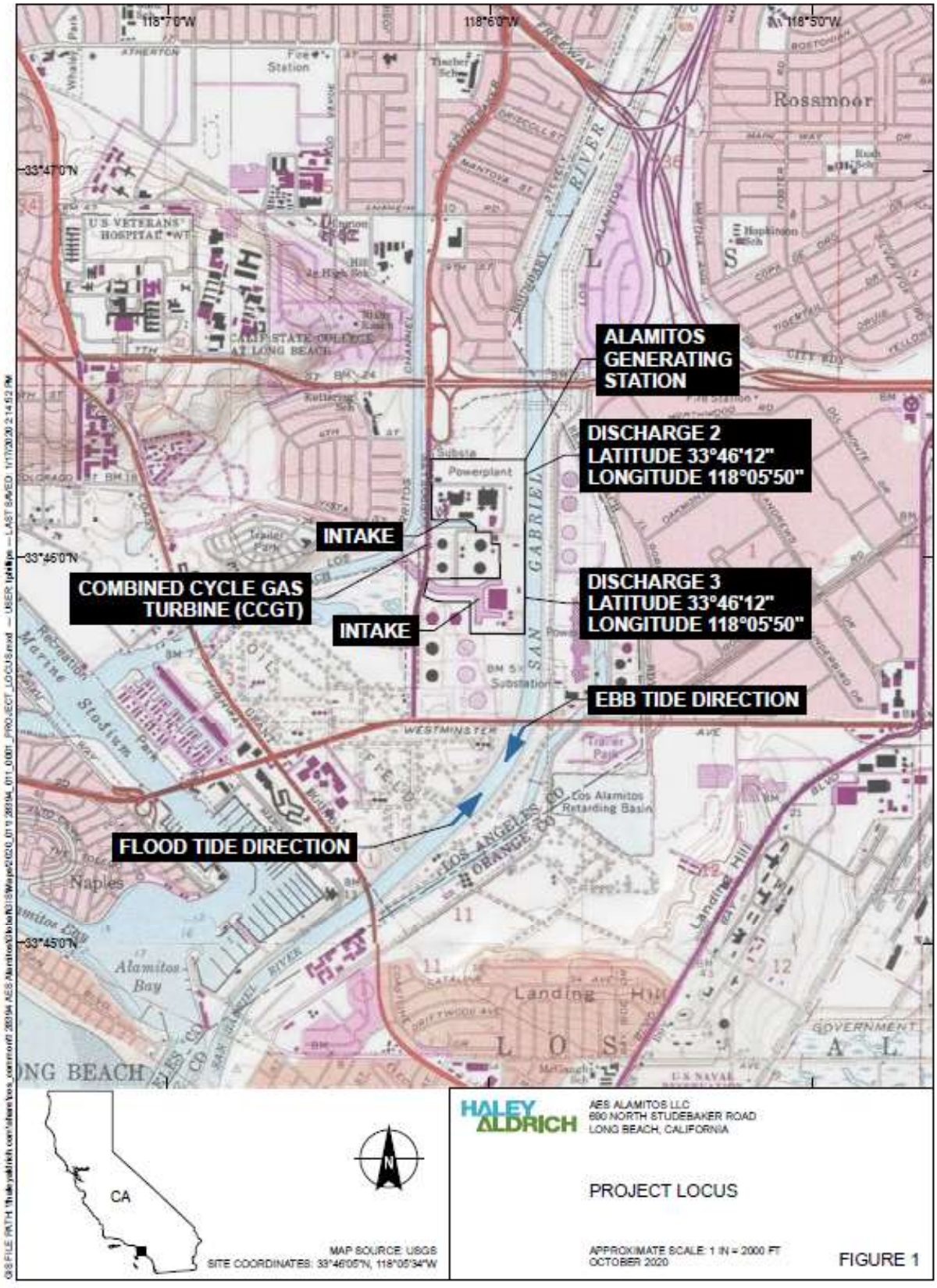
Trash
All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

ACRONYMS AND ABBREVIATIONS

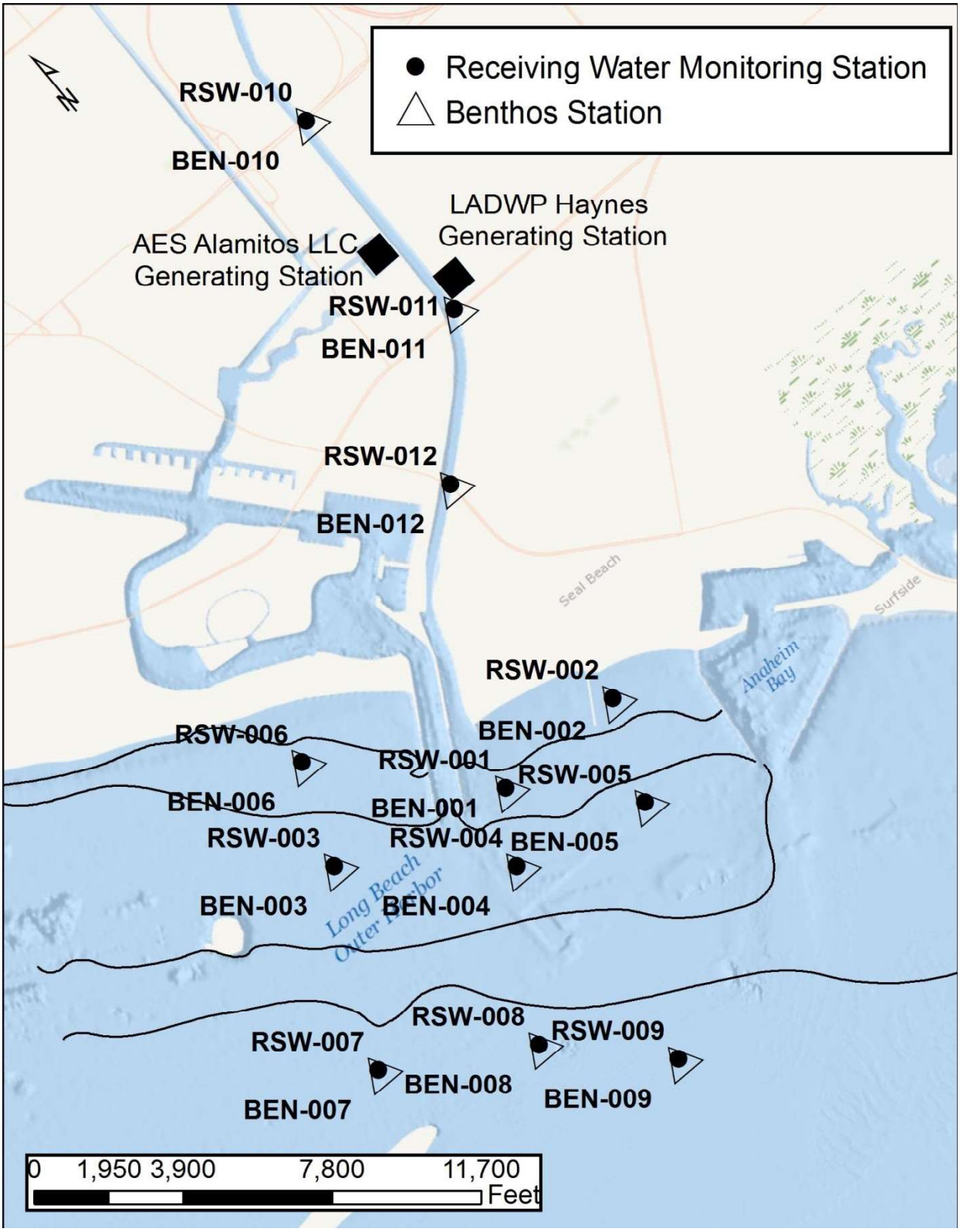
AMEL	Average Monthly Effluent Limitation
B	Background Concentration
BAT	Best Available Technology Economically Achievable
Basin Plan	*Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BMPP	Best Management Practices Plan
BPJ	Best Professional Judgment
BOD	Biochemical Oxygen Demand 5-day @ 20 °C
BPT	Best Practicable Treatment Control Technology
C	Water Quality Objective
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
CWC	Water Code
Discharger	AES Alamitos LLC
DMR	Discharge Monitoring Report
DNQ	Detected But Not Quantified
ELAP	State Water Resources Control Board, Drinking Water Division, Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines and Standards
Facility	Alamitos Generating Station
GPD	gallons per day
IWC	In-stream Waste Concentration
LA	Load Allocations
LOEC	Lowest Observed Effect Concentration
µg/L	micrograms per Liter
mg/L	milligrams per Liter
MDEL	Maximum Daily Effluent Limitation
MEC	Maximum Effluent Concentration
MGD	Million Gallons Per Day
ML	Minimum Level
MPN	Most Probable Number
MRP	Monitoring and Reporting Program
ND	Not Detected
NOEC	No Observable Effect Concentration
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NTR	National Toxics Rule
NTU	Nephelometric Turbidity Unit

OAL	Office of Administrative Law
PMEL	Proposed Maximum Daily Effluent Limitation
PMP	Pollutant Minimization Plan
POTW	Publicly Owned Treatment Works
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
Ocean Plan	*Water Quality Control Plan for Ocean Waters of California*
Regional Water Board	California Regional Water Quality Control Board, Los Angeles Region
RPA	Reasonable Potential Analysis
SCP	Spill Contingency Plan
Sediment Quality Plan	*Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality*
SIP	State Implementation Policy (*Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*)
SMR	Self-Monitoring Reports
SPCC	Spill Prevention Control and Countermeasures Plan
State Water Board	California State Water Resources Control Board
SVE	Soil Vapor Extraction
SWPPP	Storm Water Pollution Prevention Plan
TAC	Test Acceptability Criteria
TBEL	Technology-based Effluent Limitation
Thermal Plan	*Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California*
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TRE	Toxicity Reduction Evaluation
TSD	Technical Support Document (*Technical Support Document for Water*) *Quality-based Toxics Control* (EPA/505/2-90-001,1991)
TSS	Total Suspended Solids
TST	Test of Significant Toxicity
TU_c	Chronic Toxicity Unit
U.S. EPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WLA	Waste Load Allocations
WQBELs	Water Quality-Based Effluent Limitations
WQO	Water Quality Objective
WQS	Water Quality Standards
%	Percent

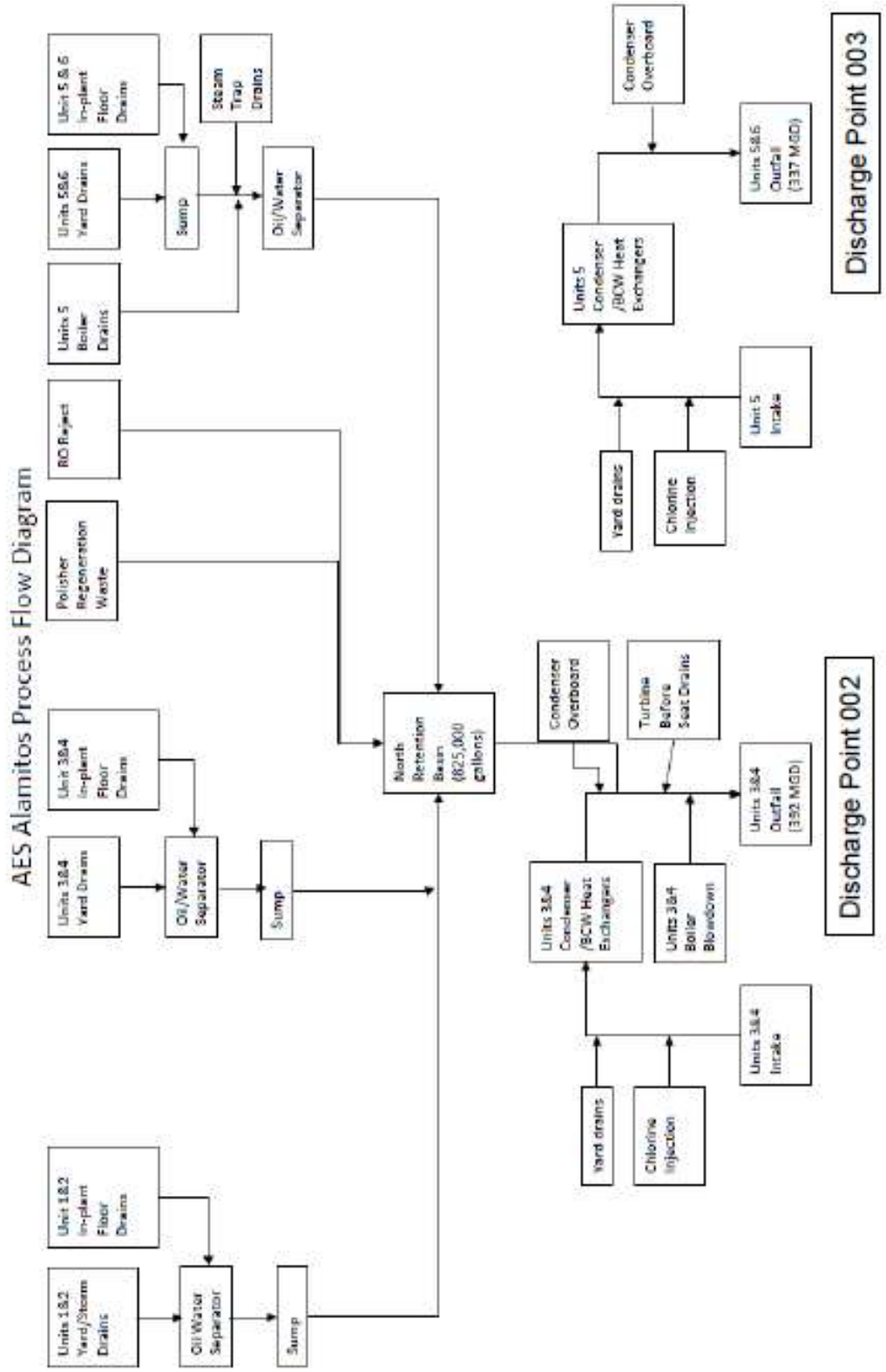
ATTACHMENT B – MAPS: FACILITY LOCATION MAP



ATTACHMENT B – MAPS: RECEIVING WATER MONITORING LOCATIONS



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

1. STANDARD PROVISIONS – PERMIT COMPLIANCE

1.1. Duty to Comply

1.1.1. 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 Code of Federal Regulations (CFR) § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

1.1.2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants 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 CFR § 122.41(a)(1).)

1.2. 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 CFR § 122.41(c).)

1.3. Duty to Mitigate

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

1.4. 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 CFR § 122.41(e).)

1.5. Property Rights

1.5.1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR § 122.41(g).)

1.5.2. 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 CFR § 122.5(c).)

1.6. 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 CFR § 122.41(i); Wat. Code, §§ 13267, 13383):

1.6.1. 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 CFR § 122.41(i)(1); Wat. Code, §§ 13267, 13383);

1.6.2. 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 CFR § 122.41(i)(2); Wat. Code, §§ 13267, 13383);

1.6.3. 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 CFR § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and

1.6.4. 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 CFR § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

1.7. Bypass

1.7.1. Definitions

1.7.1.1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 122.41(m)(1)(i).)

1.7.1.2. "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 CFR § 122.41(m)(1)(ii).)

1.7.2. **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 1.7.3, 1.7.4, and 1.7.5 below. (40 CFR § 122.41(m)(2).)

1.7.3. **Prohibition of bypass.** Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR § 122.41(m)(4)(i)):

1.7.3.1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 122.41(m)(4)(i)(A));

1.7.3.2. 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 CFR § 122.41(m)(4)(i)(B)); and

1.7.3.3. The Discharger submitted notice to the Regional Water Board's required under Standard Provisions – Permit Compliance 1.7.5 below. (40 CFR § 122.41(m)(4)(i)(C).)

1.7.4. 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 1.7.3 above. (40 CFR § 122.41(m)(4)(ii).)

1.7.5. **Notice**

1.7.5.1. **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. As of December 21, 2020, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(m)(3)(i).)

1.7.5.2. **Unanticipated bypass.** The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting 5.5 below (24-hour notice). As of December 21, 2020, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(m)(3)(ii).)

1.8. 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 CFR § 122.41(n)(1).)

1.8.1. **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 1.8.2 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 CFR § 122.41(n)(2).)

1.8.2. **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 CFR § 122.41(n)(3)):

1.8.2.1. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));

1.8.2.2. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));

1.8.2.3. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting 5.5.2.2 below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and

1.8.2.4. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance 1.3 above. (40 CFR § 122.41(n)(3)(iv).)

1.8.3**. Burden of proof.** In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR § 122.41(n)(4).)

2. STANDARD PROVISIONS – PERMIT ACTION

2.1. 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 CFR § 122.41(f).)

2.2. 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 CFR § 122.41(b).)

2.3. 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 CFR §§ 122.41(l)(3), 122.61.)

3. STANDARD PROVISIONS – MONITORING

3.1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR § 122.41(j)(1).)

3.2. Monitoring must be conducted according to test procedures approved under 40 CFR part 136 for the analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 CFR part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

3.2.1. 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

3.2.2. The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter 1, subchapter N for the measured pollutant or pollutant parameter. In the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR part 136, or otherwise required under 40 CFR chapter 1, subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 CFR §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).)

4. STANDARD PROVISIONS – RECORDS

4.1. 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 CFR § 122.41(j)(2).)

4.2. Records of monitoring information shall include:

4.2.1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));

4.2.2. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));

4.2.3. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));

4.2.4. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));

4.2.5. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and

4.2.6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi).)

4.3. Claims of confidentiality for the following information will be denied (40 CFR § 122.7(b)):

4.3.1. The name and address of any permit applicant or Discharger (40 CFR § 122.7(b)(1)); and

4.3.2. Permit applications and attachments, permits and effluent data. (40 CFR § 122.7(b)(2).)

5. STANDARD PROVISIONS – REPORTING

5.1. 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 CFR § 122.41(h); Wat. Code, §§ 13267, 13383.)

5.2. Signatory and Certification Requirements

5.2.1. 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 5.2.2, 5.2.3, 5.2.4, 5.2.5, and 5.2.6 below. (40 CFR § 122.41(k).)

5.2.2. 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 CFR § 122.22(a)(1).)

5.2.3. 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 5.2.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

5.2.3.1. The authorization is made in writing by a person described in Standard Provisions – Reporting 5.2.2 above (40 CFR § 122.22(b)(1));

5.2.3.2. 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 CFR § 122.22(b)(2)); and

5.2.3.3. The written authorization is submitted to the Regional Water Board and State Water Board. (40 CFR § 122.22(b)(3).)

5.2.4. If an authorization under Standard Provisions – Reporting 5.2.3 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 5.2.3 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 CFR § 122.22(c).)

5.2.5. Any person signing a document under Standard Provisions – Reporting 5.2.2 or 5.2.3 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 CFR § 122.22(d).)

5.2.6. Any person providing the electronic signature for documents described in Standard Provisions – 5.2.1, 5.2.2, or 5.2.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting 5.2, and shall ensure that all relevant requirements of 40 CFR part 3 (Cross-Media Electronic Reporting) and 40 CFR part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R § 122.22(e).)

5.3. Monitoring Reports

5.3.1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR § 122.41(l)(4).)

5.3.2. 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. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 and comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(l)(4)(i).)

5.3.3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR part 136, or another method required for an industry-specific waste stream under 40 CFR chapter 1, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Regional Water Board or State Water Board. (40 CFR § 122.41(l)(4)(ii).)

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

5.4. 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 CFR § 122.41(l)(5).)

5.5. Twenty-Four Hour Reporting

5.5.1. 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, 2023, 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 5.10 The reports shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR 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 CFR § 122.41(l)(6)(i).)

5.5.2. The following shall be included as information that must be reported within 24 hours:

5.5.2.1. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(A).)

5.5.2.2. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B).)

5.5.3. 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 CFR § 122.41(l)(6)(ii)(B).)

5.6. 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 CFR § 122.41(l)(1)):

5.6.1. 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 CFR § 122.41(l)(1)(i)); or

5.6.2. 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 CFR § 122.41(l)(1)(ii).) **OR**

5.6.2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels 7.1.1). (40 CFR § 122.41(l)(1)(ii).)

5.7. Anticipated Noncompliance

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

5.8. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting 5.3, 5.4, and 5.5 above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5.5 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 5.5 and the applicable required data in appendix A to 40 CFR 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 CFR § 122.41(l)(7).)

5.9 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 CFR § 122.41(l)(8).)

5.10. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 CFR part 127 to the initial recipient defined in 40 CFR 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 CFR section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 CFR § 122.41(l)(9).)

6. STANDARD PROVISIONS – ENFORCEMENT

6.1. 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.

6.2. 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].

6.3 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 CFR section 122.41(a)(3)].

6.4 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 CFR section 122.41(j)(5)].

6.5 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 CFR section 122.41(k)(2)].

7. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

7.1. 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 CFR § 122.42(a)):

7.1.1. 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 CFR § 122.42(a)(1)):

7.1.1.1. 100 micrograms per liter (µg/L) (40 CFR § 122.42(a)(1)(i));

7.1.1.2. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4 dinitrophenol and 2-methyl 4,6 dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 CFR § 122.42(a)(1)(ii));

7.1.1.3. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR § 122.42(a)(1)(iii)); or

7.1.1.4. The level established by the Regional Water Board in accordance with section 122.44(f). (40 CFR § 122.42(a)(1)(iv).)

7.1.2. 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 CFR § 122.42(a)(2)):

7.1.2.1. 500 micrograms per liter (µg/L) (40 CFR § 122.42(a)(2)(i));

7.1.2.2. 1 milligram per liter (mg/L) for antimony (40 CFR § 122.42(a)(2)(ii));

7.1.2.3. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR § 122.42(a)(2)(iii)); or

7.1.2.4. The level established by the Regional Water Board in accordance with section 122.44(f). (40 CFR § 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP 6113)

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 CFR) 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.

1. GENERAL MONITORING PROVISIONS

1.1. Effluent sampling stations shall be established for Discharge Point 002 (Latitude 33.770000º North, Longitude -118.097222º West), and Discharge Point 003 (Latitude 33.764722º North, Longitude -118.097222º West). Storm water runoff sampling stations shall be established at outfall O-48 (Latitude 33.768394º North, Longitude -118.100725º West) and outfall O-84 (Latitude 33.765078º North, Longitude -118.100347º West). These sampling stations shall be located where representative samples of that effluent can be obtained.

1.2. Effluent samples shall be taken downstream of any treatment works and prior to mixing with the receiving waters.

1.3. 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.

1.4. Pollutants shall be analyzed using the analytical methods described in 40 CFR sections 136.3, 136.4, and 136.5 (revised August 28, 2017); or, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Resources Control Board (State Water Board).

1.5. **Laboratory Certification**: Laboratories analyzing monitoring samples shall be certified by the State Water Board, 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.

1.6. For any analysis 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.

1.7. 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, Environmental Laboratory Accreditation Program or approved by the Executive Officer and in accordance with current U.S. EPA guideline procedures or as specified in this MRP".*

1.8. 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:

1.8.1. An actual numerical value for sample results greater than or equal to the ML; or

1.8.2. "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML; or,

1.8.3. "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 MLs 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*, (State Implementation Policy or SIP), February 24, 2005, Appendix 4.

1.9. 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 40 CFR parts 122 and 136; *Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting*. If the ML value is not below the effluent limitation, 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.

1.10. 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 40 CFR parts 122 and 136; *Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting*. Water quality objectives for parameters may be found in Chapter 3 of the Basin Plan and the CTR (40 CFR 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 MDLs.

The Regional Water Board, in consultation with the State Water Board Quality Assurance Program, shall establish a ML that is not contained in Appendix 4 of the SIP to be included in the Discharger's permit in any of the following situations:

1.10.1. When the pollutant under consideration is not included in Appendix 4 of the SIP;

1.10.2. When the Discharger and Regional Water Board agree to include in the permit a test method that is more sensitive than that specified in part 136 (revised August 28, 2017);

1.10.3. When the Discharger agrees to use an ML that is lower than that listed in Appendix 4 of the SIP;

1.10.4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Appendix 4 of the SIP, and proposes an appropriate ML for their matrix; or,

1.10.5. 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.

1.11. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR 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.

1.12. Field analyses with short sample holding time such as pH, total chlorine residual, 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 CFR 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.

1.13. 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.

1.14. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments to ensure accuracy of measurements, or shall insure that both equipment activities will be conducted.

1.15. The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

State Water Resources Control Board
Quality Assurance Program Officer
Office of Information Management and Analysis
1001 I Street, Sacramento, CA 95814

1.16. 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.

1.17. In the event wastes are transported to a different disposal site during the reporting period, the following shall be reported in the monitoring report:

1.17.1. Types of wastes and quantity of each type;
1.17.2. Name and address for each hauler of wastes (or method of transport if other than by hauling); and
1.17.3. 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.

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

2. 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 (latitude and longitude information in Table E-1 is approximate for administrative purposes):

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
002	EFF-002	At a location where a representative sample of the commingled wastewater can be obtained after treatment but prior to discharge to the San Gabriel River Estuary via Discharge Point 002. (33.770000º N, -118.097222º W)
003	EFF-003	At a location where a representative sample of the commingled wastewater can be obtained after treatment but prior to discharge to the San Gabriel River Estuary via Discharge Point 003. (33.764722º N, -118.097222º W)
North Basin	INT-001A	At a location from the North Basin where a representative sample of all low volume wastes can be obtained after treatment but prior to commingling with other internal process waste streams or once-through cooling water.

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
D1	O-48	At a location where a representative sample of the storm water runoff from the area around Units 1-4 can be obtained. (33.768394º N, -118.100725º W
D3	O-84	At a location where a representative sample of the storm water runoff from the area around Units 5-6 can be obtained. (33.765078º N, -118.100347º W)
Intake canal	FIP-002	At a location where Fish Impingement Program sampling for Units 3 and 4 can be conducted.
Intake canal	FIP-003	At a location where Fish Impingement Program sampling for Unit 5 can be conducted.
Receiving water station	RSW-001	Seaward of the southeast San Gabriel River Jetty, at a depth of 12 feet. (33.735667° N, -118.117167° W)
Receiving water station	RSW-002	500 feet downcoast of the Seal Beach Pier, at a depth of 12 feet. (33.735500° N, -118.106667° W)
Receiving water station	RSW-003	Directly offshore of Monitoring Location RSW-006, at a depth of 20 feet. (33.738833° N, -118.130167° W)
Receiving water station	RSW-004	Directly offshore of Monitoring Location RSW-001, at a depth of 20 feet. (33.731667° N, -118.120167° W)
Receiving water station	RSW-005	Directly offshore of Monitoring Location RSW-002, at a depth of 20 feet. (33.729667° N, -118.110333° W)
Receiving water station	RSW-006	2,600 feet upcoast of the northwest Alamitos Bay Jetty at a depth of 12 feet. (33.744500° N, -118.127333° W)
Receiving water station	RSW-007	Directly offshore of Monitoring Location RSW-003, at a depth of 40 feet. (33.727667° N, -118.137333° W)
Receiving water station	RSW-008	Directly offshore of Monitoring Location RSW-004, at a depth of 40 feet. (33.722500° N, -118.127333° W)
Receiving water station	RSW-009	Directly offshore of Monitoring Location RSW-005, at a depth of 40 feet. (33.717333° N, -118.119667° W)
Receiving water station	RSW-010	At the 7th Street Bridge, at a point midway between the banks of the San Gabriel River Estuary. (33.773667° N, -118.097667° W)
Receiving water station	RSW-011	At the Westminster Avenue Bridge, at a point midway between the banks of the San Gabriel River Estuary. (33.759667° N, -118.098667° W)
Receiving water station	RSW-012	At the Pacific Coast Highway Bridge, at a point midway between the banks of the San Gabriel River Estuary. (33.752167° N, -118.106167° W)
Benthic station	BEN 001, BEN 003, BEN 004, BEN 005, BEN 007, BEN 008, BEN 009, BEN 010, BEN 011 and BEN 012	Located directly beneath Monitoring Locations RSW 001, RSW 003, RSW 004, RSW 005, RSW 007, RSW 008, RSW 009, RSW 010, RSW 011 and RSW 012, respectively.

3. INFLUENT MONITORING REQUIREMENTS

Fish Impingement Program. Impingement sampling for fish and commercially important macroinvertebrates shall be conducted semiannually at Monitoring Locations FIP-002 and FIP-003. Fish and macroinvertebrates shall be identified to the lowest possible taxon. For each intake point, data reported shall include numerical abundance of each fish and macroinvertebrate species, wet weight of each species (when combined weight of individuals in each species exceeds 0.2 kg), number of individuals in each 1-centimeter size class (based on standard length) for each species and total number of species collected. When large numbers of given species are collected, length/weight data need only be recorded for 50 individuals and total number and total weight may be estimated based on aliquot samples. Total fish impingement per sampling event shall be reported and data shall be expressed per unit volume water entrained.

4. EFFLUENT MONITORING REQUIREMENTS

4.1. Monitoring Locations EFF-002, EFF-003

Table E-2. Effluent Monitoring at Locations EFF-002, EFF-003

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow (Note a)	MGD	Flow Meter	Continuously	---
Temperature (Note b)	°F	Meter	Continuously	---
Free Available Chlorine	mg/L	Grab	1/day (Note c)	(Note d)
Total Residual Chlorine	mg/L	Grab	1/day (Note c)	(Note d)
pH	standard units	Grab	1/Week	---
Enterococcus	cfu/100 ml or mpn/100 ml	Grab	1/Year	(Note d)
Chronic Toxicity	Pass/Fail, % Effect	Grab or Composite	2/Year	(Note e)
Copper, Total Recoverable (Note f)	µg/L and mass (Note g)	Grab or Composite	2/Year	(Note d)
Mercury	µg/L	Grab or Composite	2/Year	(Note d)
Nickel, Total Recoverable	µg/L and mass (Note g)	Grab or Composite	2/Year	(Note d)
Bis(2-ethylhexyl) phthalate	µg/L and mass (Note g)	Grab	2/Year	(Note d)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Ammonia, Total (as N)	mg/L	Grab or Composite	2/Year	(Note d)
Radioactivity (Note h)	pCi/L	Grab	1/Year	(Note d)
Remaining Priority Pollutants (Note i)	µg/L	Grab or Composite	1/Year	(Note d)
TCDD Equivalents (Note j)	µg/L	Grab or Composite	1/Permit Term	(Note d)

Footnotes for Table E-2

a. When continuous monitoring is required, the total daily flow shall be reported. Periods of no flow shall also be reported.

b. Only maximum temperatures for each calendar day shall be reported.

c. Monitoring is only applicable during periods of chlorine addition. A statement certifying that chlorination did not occur during the day may be submitted in lieu of an analysis.

d. Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136; for priority pollutants, the methods must meet the lowest MLs specified in Appendix 4 of the SIP. Where no methods are specified for a given pollutant, the methods must be approved by the 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 a sufficiently sensitive method from the listed methods and corresponding ML necessary to demonstrate compliance with applicable effluent limitations.

e. Refer to section 5 below, Whole Effluent Toxicity Testing Requirements.

f. On days when copper sampling occurs, the Discharger shall report the corresponding flow rate measured at flow gage F354-R in Coyote Creek which is operated by the Los Angeles County Department of Public Works.

g. The mass emission (lbs/day) for the discharge shall be calculated and reported using the measured concentration and the actual flow rate measured at the time of discharge, using the formula.

$$M = 8.34 \times Ce \times Q$$

where: M = mass discharge for a pollutant, lbs/day
Ce = measured concentration for a pollutant, mg/L
Q = actual discharge flow rate, MGD

h. Analyze these radiochemicals by the following U.S. EPA methods: method 900.0 for gross alpha and gross beta, method 903.0 or 903.1 for radium-226, method 904.0 for radium-228, method 906.0 for tritium, method 905.0 for strontium-90, and method 908.0 for uranium. Analysis for combined radium-226 & 228 shall be conducted only if gross alpha results for the same sample exceed 15 pCi/L or beta greater than 50 pCi/L. If radium-226 & 228 exceeds the stipulated criteria, analyze for tritium, strontium-90 and uranium. A statement certifying that radioactive pollutants were not added to the discharge may be submitted in lieu of monitoring.

i. Priority Pollutants are those constituents referred to in 40 CFR section 401.15; a list of these pollutants is provided as Appendix A to 40 CFR part 423.

j. TCDD equivalents shall be calculated using the following formula, where the Minimum Levels (ML), and 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 minimum levels to zero. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners.

Dioxin-TEQ (TCDD equivalents) = $\Sigma(C_x \times TEF_x)$

where: C_X = concentration of dioxin or furan congener x
TEF_X = TEF for congener x

Toxicity Equivalency Factors

Congeners	Minimum Level (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

End of Footnotes for Table E-2

4.2. Monitoring Location INT-001A (North Basin)

Table E-3. Effluent Monitoring at Location INT-001A

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow (Note a)	MGD	---	Continuously	---
pH	standard units	Grab	1/Month (Note b)	---
Total Suspended Solids	mg/L	Grab	1/Month (Note b)	(Note c)
Oil and Grease	mg/L	Grab	1/Month (Note b)	(Note c)

Footnotes for Table E-3

a. When continuous monitoring is required, the total daily flow shall be reported. Periods of no flow shall also be reported.

b. If a discharge of low volume wastes from the retention basin occurs during the monitoring period, then the Discharger must sample for the final combined effluent during the duration of such discharge, and so state under penalty of law in the corresponding monitoring report.

c. Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136; for priority pollutants, the methods must meet the lowest MLs specified in Appendix 4 of the SIP. Where no methods are specified for a given pollutant, the methods must be approved by the 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 a sufficiently sensitive method from the listed methods and corresponding ML necessary to demonstrate compliance with applicable effluent limitations.

End of Footnotes for Table E-3

4.3. Monitoring Locations O-48 and O-84 (Storm Water)

Table E-4. Effluent Monitoring at Locations O-48 and O-84

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow (Notes a)	MGD	---	Continuously	---
Temperature	°F	Grab	1/Quarter	---
pH	standard units	Grab	1/Quarter	---
Total Suspended Solids	mg/L	Grab	1/Quarter	(Note b)
Oil and Grease	mg/L	Grab	1/Quarter	(Note b)
Priority Pollutants (Note c)	µg/L	Grab or Composite	1/Year	(Note b)

Footnotes for Table E-4

a. When continuous monitoring is required, the total daily flow shall be reported.

b. Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136; for priority pollutants, the methods must meet the lowest MLs specified in Appendix 4 of the SIP. Where no methods are specified for a given pollutant, the methods must be approved by the 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 a sufficiently sensitive method from the listed methods and corresponding ML necessary to demonstrate compliance with applicable effluent limitations.

c. Priority Pollutants are those constituents referred to in 40 CFR section 401.15; a list of these pollutants is provided as Appendix A to 40 CFR part 423.

End of Footnotes for Table E-4

5. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

5.1. Chronic Toxicity

5.1.1. **Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity.** The chronic toxicity IWC for this discharge at Discharge Points 002 and 003 is 100 percent effluent.

5.1.2. **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. Sufficient sample volume shall also be collected for subsequent TIE studies, if necessary, at each sampling event. 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**.**

5.1.3. **Chronic Marine and Estuarine 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 West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). Artificial sea salts or hypersaline brine shall be used to increase sample salinity if needed. In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

5.1.3.1. A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.0).

5.1.3.2. A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, or the sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0); or a static non-renewal toxicity test with the red abalone, *Haliotis rufescens* (Larval Shell Development Test Method); or a static non-renewal test with the pacific oyster, *Crassostrea gigas*, and a mussel species, *Mytilus edulis, M. californianus, M. galloprovincialis, or M. trossulus* (Embryo-Larval Development Test Method).

5.1.3.3. A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0).

5.1.4. **Species Sensitivity Screening.** Species sensitivity screening shall be conducted monthly during the first three monthly monitoring events after the effective date of this Order. Once each month, the Discharger shall collect a single effluent sample to initiate and concurrently conduct three toxicity tests using the fish, an invertebrate, and the alga species previously referenced. If the result of all three species is “Pass”, then 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. If only one species fails,

then that species shall be used for routine monitoring during the permit cycle. Likewise, if two or more species result in "Fail", then the species that exhibits the highest "Percent Effect" at the discharge IWC during the suite of species sensitivity screening shall be used for routine monitoring during the permit cycle, until such time as a rescreening is required.

Species sensitivity rescreening is required every 24 months. The Discharger shall rescreen with the marine vertebrate species, a marine invertebrate species, and alga species previously referenced 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 suite of tests. If a different species is the most sensitive or if there is ambiguity, then the Permittee shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites.

During the calendar month, toxicity tests used to determine the most sensitive test species shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL.

5.1.5. **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 a 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* and Appendix B, Table B-1. The null hypothesis (Ho) for the TST approach is: Mean discharge IWC response ≤0.75 × 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: ((Mean control response - Mean discharge IWC response) ÷ Mean control response)) × 100. This is a t-test (formally Student's t-Test), a statistical analysis comparing two sets of replicate observations - in the case of WET, only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is "Pass" or "Fail")). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances

b. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA 2002, EPA-821-R-02-013) (See Table E-5, below), then

the Permittee must re-sample and re-test at the subsequent discharge event.

Table E-5. USEPA Methods and Test Acceptability Criteria for West Coast Marine and Estuarine Organisms

Species & USEPA Test Method Number	Test Acceptability Criteria (TAC)
Topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.0, Table 3 of the test method, above).	≥80% survival in controls; 0.85 mg average weight of control larvae (9 day old), LC50 with copper must be ≤205 µg/L, <25% Minimum Significant Difference (MSD) for survival and <50% MSD for growth.
Purple sea urchin, *Strongylocentrotus purpuratus*, and the sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0, Table 7 of the test method, above)	≥70% egg fertilization in controls; %MSD of <25%; and appropriate sperm counts.
Red abalone, *Haliotis rufescens* (Larval Shell Development Test Method, Table 3 of the test method, above).	≥80% normal shell development in the controls; must have statistical significant effect at 56 µg/L zinc; must achieve a %MSD of <20%.
Giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0 (Table 3 of the test method, above).	≥70% germination in the controls; ≥10 µm germ-tube length in the controls and the NOEC must be below 35 µg/L in the reference toxicant test; must achieve a %MSD of <20 for both germination and germ-tube length in the reference toxicant.

c. Dilution water and control water, including brine controls, shall be 1-µm-filtered uncontaminated natural seawater, hypersaline brine prepared using uncontaminated natural seawater, or 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. When preparing samples for toxicity testing, in addition to the required monitoring for conductivity, etc., it is recommended that total alkalinity and total hardness be measured in the undiluted effluent, receiving water, dilution water, and culture water (following the WET methods manual), as well as the major geochemical ions (see Mount et al., 2018).

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 shall be reviewed and reported using the EC25, where EC25 is a point estimate of the toxicant concentration that would cause an observable adverse effect

(e.g. death, immobilization, or serious incapacitation) in 25 percent of the test organisms.

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).

5.1.6. **Accelerated Monitoring Schedule for Median Monthly Summary Result "Fail" (or Maximum Daily Single Result: "Fail and % Effect ≥ 50".**

The summary result shall be used when there is discharge more than one day in a calendar month. The single result shall be used when there is discharge of only one day in a calendar month.

Once the Discharger becomes aware of this result, the Discharger shall implement an accelerated monitoring schedule within five calendar days of the receipt of the result. However, if the sample is contracted out to a commercial laboratory, the Discharger shall ensure that the first of four accelerated monitoring tests is initiated within seven calendar days of the Discharger becoming aware of the result or at the next discharge event if no discharge occurs within seven days. The accelerated monitoring schedule shall consist of four toxicity tests (including IWC), conducted at approximately two-week intervals, over an eight- week period; in preparation for the TRE process and associated reporting, these results shall also be reported using the EC25. If each of the accelerated toxicity tests results in "Pass", the Permittee shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results in "Fail," the Permittee shall immediately implement the TRE Process conditions set forth below.

5.2 Preparation of an Initial Investigation Toxicity Reduction Evaluation Workplan

The Discharger shall prepare and submit a copy of the Discharger's initial investigation TRE work plan to the Executive Officer of the Regional Water Board for approval within 90 days of the effective date of this permit. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use the *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, 1989), or the most current version, as guidance. This work plan shall describe the steps that the Discharger intends to follow if toxicity is detected. At a minimum, the TRE Work Plan must describe the steps that the Discharger intends to follow if toxicity is detected. At a minimum the work plan shall include:

5.2.1. 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.

5.2.2. A description of the Facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the Facility; and,

5.2.3. 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).

5.3 Toxicity Reduction Evaluation (TRE) Process

5.3.1. **Preparation and Implementation of Detailed TRE Work Plan.** The Discharger shall immediately initiate a TRE and, within 15 days, submit to the Executive Officer a Detailed TRE Work Plan, which shall follow the generic Initial Investigation TRE Work Plan revised as appropriate for this toxicity event. It shall include the following information, and comply with additional conditions set by the Executive Officer:

a. Further actions by the Discharger to investigate, identify, and correct the causes of toxicity.

b. Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.

c. A schedule for these actions, progress reports, and the final report.

5.3.2. **TIE Implementation.** The Discharger may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test method and, as guidance, U.S. 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.

5.3.3. 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.

5.3.4. The Discharger shall continue to conduct routine effluent monitoring for compliance determination purposes while the TIE and/or TRE is taking place. Additional accelerated monitoring and TRE work plans are not required once a TRE has begun.

5.3.5. The Regional Water Board and U.S. EPA recognize 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.

5.3.6 The Board may consider the results of any TIE/TRE studies in an enforcement action.

5.4 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:

5.4.1. The toxicity test results for the TST statistical approach, reported as “Pass” or “Fail” and “Percent (%) Effect” at the chronic toxicity IWC for the discharge. All toxicity test results (whether identified as valid or otherwise) conducted during the calendar month shall be reported on the SMR due date specified in Table E-10.

5.5.2. Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).

5.5.3. TRE/TIE results. The Regional Water Board Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses.

5.5.4. Statistical program (e.g., TST calculator, CETIS, etc.) output results for each toxicity test.

5.5.5. Any additional QA/QC documentation or any additional chronic toxicity related information, upon request by Regional Water Board staff.

6. LAND DISCHARGE MONITORING REQUIREMENTS—NOT APPLICABLE

7. RECYCLING MONITORING REQUIREMENTS—NOT APPLICABLE

8. RECEIVING WATER MONITORING REQUIREMENTS

8.1. Surface Water Monitoring

Table E-6. Receiving Water Monitoring Requirements for RSW-001 through RSW-012

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH (Note d)	standard units	Grab	2/Year (Note a)	(Note b)
Temperature (Notes d and e)	ºF	Grab	2/Year (Note a)	(Note b)
Salinity (Note d)	ppm	Grab	2/Year (Note a)	(Note b)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Ammonia, Total (as N) (Note c)	mg/L	Grab	1/Year	(Note b)
Enterococcus	cfu/100 ml or mpn/100 ml	Grab	1/Year	(Note b)
Priority Pollutants (Note c and f)	µg/L	Grab	1/Year	(Note b)

Footnotes for Table E-6

a. Receiving water pH, temperature and salinity must be analyzed concurrent with effluent ammonia monitoring.

b. Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136; for priority pollutants, the methods must meet the lowest MLs specified in Appendix 4 of the SIP. Where no methods are specified for a given pollutant, the methods must be approved by the 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 a sufficiently sensitive method from the listed methods and corresponding ML necessary to demonstrate compliance with applicable effluent limitations.

c. Monitoring is required solely at Monitoring Locations RSW-010 and RSW-011.

d. Semi-annual monitoring shall be conducted in summer and in winter. All monitoring locations shall be sampled on both the flood and ebb tides during each semi-annual survey, as near to the start of the flood and ebb tides as is practicable.

e. Temperature profiles shall be measured semi-annually (summer and winter) each year at each monitoring location from surface to bottom at a minimum of one-meter intervals.

f. Priority Pollutants are those constituents referred to in 40 CFR section 401.15; a list of these pollutants is provided as Appendix A to 40 CFR part 423.

End of Footnotes for Table E-6

8.2. Harbor Toxics TMDL Monitoring Requirements

As discussed in section 3.4. of the Fact Sheet (Attachment F), the Discharger is responsible for conducting water column monitoring at the mouth of the San Gabriel River as required in the Harbor Toxics TMDL. Therefore, the Discharger shall monitor the receiving water at Monitoring Location RSW-001 as follows:

Table E-7. Harbor Toxics TMDL Monitoring Requirements for RSW-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	standard units	Grab	3/Year (Note a)	(Note b)
Temperature	ºF	Grab	3/Year (Note a)	(Note b)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Suspended Solids	mg/L	Grab	3/Year (Note a)	(Note b)
Dissolved Oxygen	mg/L	Grab	3/Year (Note a)	(Note b)
Electrical Conductivity	umho/cm	Grab	3/Year (Note a)	(Note b)
Copper	µg/L	Grab	3/Year (Note a)	(Note b)
Lead	µg/L	Grab	3/Year (Note a)	(Note b)
Zinc	µg/L	Grab	3/Year (Note a)	(Note b)
Mercury	µg/L	Grab	3/Year (Note a)	(Note b)
4,4'-DDT	µg/L	Grab	3/Year (Note a)	(Note b)
PCBs (Note c)	µg/L	Grab	3/Year (Note a)	(Note b)
Benzo(a) anthracene	µg/L	Grab	3/Year (Note a)	(Note b)
Benzo(a) pyrene	µg/L	Grab	3/Year (Note a)	(Note b)
Chrysene	µg/L	Grab	3/Year (Note a)	(Note b)

Footnotes for Table E-7

a. Water samples shall be collected during two wet weather events and one dry weather event each year. The first storm event that has a predicted rainfall of 0.25 inch (within 24-hour period) and at least 70% probability of rainfall at least 24 hours prior to the event shall be monitored as a wet weather event. An additional wet weather event shall be monitored. Depending on forecasts (drought year vs. wet year) this event must produce at least 0.1 inch of runoff preceded by a 72-hour dry period. Consideration will be given to monitor "larger storm events" (greater than 0.5 inches) if forecasted.

b. Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136; for priority pollutants, the methods must meet the lowest MLs specified in Appendix 4 of the SIP. Where no methods are specified for a given pollutant, the methods must be approved by the 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 a sufficiently sensitive method from the listed methods and corresponding ML necessary to demonstrate compliance with applicable effluent limitations.

c. Monitoring for PCBs as aroclors using EPA Method 608 is required. PCBs as aroclors shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

End of Footnotes for Table E-7

8.3 Benthic Monitoring

8.3.1. Sediment Samples for Assessment of Benthic Infauna

8.3.1.1. The Discharger shall collect and analyze samples for benthic fauna once per year at Monitoring Locations BEN-001, BEN-003, BEN-004, BEN-005, BEN-007, BEN-008, BEN-009, BEN-010, BEN-011 and BEN-012. Receiving water monitoring for benthic fauna is not required at monitoring locations BEN-002 and BEN-006.

8.3.1.2. One-liter sediment core samples shall be collected by divers at each of the benthic stations for biological examination and determination of biomass and diversity. Four replicates shall be obtained at each station for benthic analyses, and each shall be analyzed separately. A fifth sample shall be taken at each station for sediment analyses and general description.

8.3.1.3 Each benthic replicate sample shall be sieved through a 1.0 mm standard mesh screen. All organisms recovered shall be enumerated and identified below to the lowest taxon possible. Infaunal organisms shall be reported as concentrations per liter for each replicate and each station. Total abundance, number of species and Shannon-Weiner diversity indices shall be calculated (using natural logs) for each replicate and each station. Biomass shall be determined as the wet weight in grams or milligrams retained on a 0.5 millimeter screen per unit volume (e.g., 1 liter) of sediment. Biomass shall be reported for each major taxonomic group (e.g., polychaetes, crustaceans, mollusks) for each replicate and each station.

8.3.1.4. Procedures and test methods shall adhere to the following federal guidelines when applicable: Macroinvertebrate Field and Laboratory Methods for Evaluation the Biological Integrity of Surface Waters (1990) – EPA/600/4-90/030 (PB91-171363). This manual describes guidelines and standardized procedures for the use of macroinvertebrates in evaluating the biological integrity of surface waters.

8.3.1.5. The following general observations or measurements at the benthic stations shall be reported:

a. Tidal stage and time of monitoring
b. General water conditions
c. Extent of visible turbidity or color patches
d. Appearance of oil films or grease, or floatable materials
e. Depth at each station for each sampling period
f. Presence or absence of red tide
g. Presence of marine life
h. Presence and activity of the California least tern and the California brown pelican

8.3.2. **Sediments Samples for Grain Size and Chemical Analyses.** The Discharger shall collect and analyze sediment samples at Monitoring Locations BEN-001, BEN-003, BEN-004, BEN-005, BEN-007, BEN-008, BEN-009, BEN-010, BEN-011 and BEN-012 for parameters in the following table:

Table E-8. Sediment Grain Size and Chemical Analyses Requirements

Parameter	**Units** (Note a)	**Sample Type** (Note c)	**Minimum Sampling Frequency**
Sediment Grain Size (Note b)	--	Core	1/Year
Arsenic	mg/kg	Core	1/Year
Beryllium	mg/kg	Core	1/Year
Cadmium	mg/kg	Core	1/Year
Copper	mg/kg	Core	1/Year
Chromium, Total	mg/kg	Core	1/Year
Chromium (III)	mg/kg	Core	1/Year
Lead	mg/kg	Core	1/Year
Mercury	mg/kg	Core	1/Year
Nickel	mg/kg	Core	1/Year
Selenium	mg/kg	Core	1/Year
Silver	mg/kg	Core	1/Year
Thallium	mg/kg	Core	1/Year
Zinc	mg/kg	Core	1/Year
Acid Soluble Sulfides	mg/kg	Core	1/Year
Pesticides (Note d)	mg/kg	Core	1/Year
PAHs (Note e)	mg/kg	Core	1/Year

Footnotes for Table E-8

a. Dry weight basis.

b. Sediment grain size analyses shall be performed on each sediment sample (sufficiently detailed to calculate weight in relation to phi size).

c. Three replicate samples shall be taken from the upper two centimeters at each monitoring location and analyzed separately, except for sediment grain size.

d. Pesticides shall mean aldrin, chlordane, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, dieldrin, alpha-endosulfan, beta-endosulfan, endosulfan sulfate, endrin, heptachlor, heptachlor epoxide, and toxaphene.

e. PAHs shall mean acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

End of Footnotes for Table E-8

8.4. Regional Monitoring Program

8.4.1. **Joint Effort Monitoring.** The receiving water monitoring program (i.e., Surface Water Monitoring Requirements and Benthic Monitoring Requirements) shall consist of periodic biological surveys of the area surrounding the discharge, and shall include studies of those physical and chemical characteristics of the receiving waters which may be impacted by the discharge. This program may be performed as a joint effort with the Los Angeles Department of Water and Power in connection with the receiving water monitoring program for the Haynes Generating Station.

8.4.2. **Southern California Bight.** Regular regional monitoring for the Southern California Bight has been established, occurring at five-year intervals, and is coordinated through the Southern California Coastal Water Research Project with discharger agencies and numerous other entities. The sixth regional monitoring program (Bight ’18) occurred primarily during summer 2018. The next (seventh) regional monitoring program (Bight ’23) is expected to take place during 2023.

Discharger participation in the 2023 Bight Regional Monitoring Program is required as a condition of this Order if discharge beyond the December 31, 2023 OTC Policy compliance date is a possibility. The Discharger shall complete collection and analysis of samples in accordance with the schedule established by the Steering Committee directing the Bight-wide regional monitoring surveys.

Revisions to the Discharger’s monitoring program (which may include a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples to be collected) may be necessary to accomplish the goals of regional monitoring via a monitoring resource exchange (e.g., temporary suspension of normal receiving water monitoring requirements to dedicate monitoring resources for implementation of the regional monitoring program). Such changes may be authorized by the Regional Water Board Executive Officer upon written notification to the Discharger.

9. VISUAL MONITORING OF RECEIVING WATER SAMPLING POINT

9.1. A visual observation station shall be established in the vicinity of the discharge point to the receiving water during receiving water monitoring.

9.2. General observations of the receiving water shall occur once during receiving water monitoring at a time when the Facility is discharging. All receiving water observations shall be reported in the quarterly monitoring report. Observations shall be descriptive where applicable, such that colors, approximate amounts, or types of materials apparent. The following observations shall be made:

a. Tidal stage, time and date of monitoring
b. General water and weather conditions
c. Color of water
d. Appearance of oil films or grease, or floatable materials
e. Extent of visible turbidity or color patches
f. Description of odor, if any, of the receiving water
g. Depth at each station for each sample point
h. Presence of absence of red tide
i. Presence of marine life
j. Presence and activity of the California least term and the California brown pelican
k. Description of, and estimation of the amount of any calcareous material observed in the discharge or removed manually from the intake structure

10. REPORTING REQUIREMENTS

10.1. General Monitoring and Reporting Requirements

10.1.1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

10.1.2. If there is no discharge during any reporting period, the report shall so state.

10.1.3. 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.

10.1.4. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.

10.1.5. The Discharger shall report the results of chronic toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting, Section 5.1.

10.2. Self-Monitoring Reports (SMRs)

10.2.1. 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.

10.2.2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections 3-9. 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.

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

Table E-9. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	January 1, 2021	All	Submit with quarterly SMR
1/Day	January 1, 2021	Midnight through 11:59 PM	Submit with quarterly SMR
1/Week	January 3, 2021	Sunday through Saturday	Submit with quarterly SMR
1/Month	January 1, 2021	First day of calendar month through last day of calendar month	Submit with quarterly SMR
1/Quarter	January 1, 2021	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 15 August 15 November 15 February 15
2/Year	January 1, 2021	January 1 through June 30 July 1 through December 31	Submit with quarterly SMR
1/Year	January 1, 2021	January 1 through December 31	Submit with quarterly SMR

10.2.4. **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 CFR 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:

10.2.4.1. 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).

10.2.4.2. 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 (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

10.2.4.3. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

10.2.4.4. 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.

10.2.5. **Compliance Determination.** Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above, section 7 of this Order 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).

10.2.6. **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:

10.2.6.1. 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.

10.2.6.2. 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.

10.2.7. The Discharger shall submit SMRs in accordance with the following requirements:

10.2.7.1. 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.

10.2.7.2. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the waste discharge requirements; 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.

10.3. Discharge Monitoring Reports (DMRs)

DMRs are U.S. EPA reporting requirements. Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the DMR website at:

http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring

10.4. Other Reports

10.4.1. By February 1st of each year, the Discharger is required to submit a Receiving Water Monitoring Report to the Regional Water Board.

10.4.2. Within 90 days of the effective date of this permit, the Discharger is required to submit the following to the Regional Water Board:

a. Initial Investigation TRE Workplan

b. Updated Stormwater Pollution Prevention Plan (SWPPP)

c. Updated Best Management Practices Plan (BMPP)

d. Updated Spill Contingency Plan (SCP)

10.4.3. If and when an ROWD is submitted for permit renewal, the Discharger shall also include with the permit application a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) as specified in section 6.3.4.2. of the Waste Discharge Requirements of this Order, to assess and manage climate change related effects associated with facility operation, water quality and beneficial uses

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ATTACHMENT F – FACT SHEET

As described in section 2.2 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.

1. PERMIT INFORMATION

The following table summarizes administrative information related to the facility:

Table F-1. Facility Information

WDID	4B192111006
Discharger	AES Alamitos LLC
Name of Facility	Alamitos Generating Station
Facility Address	690 N. Studebaker Road Long Beach, CA 90808
Facility Contact, Title and Phone	Jose Perez, Operations Manager, 562-493-7891
Authorized Person to Sign and Submit Reports	Jose Perez, Operations Manager, 562-493-7891
Mailing Address	690 N. Studebaker Road Long Beach, CA 90803
Billing Address	Same as above
Type of Facility	Electric Power Generation (*SIC 4911: Electric Services Steam Generation*)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Not Applicable
Recycling Requirements	Not Applicable
Facility Permitted Flow	Total: 729 million gallons per day (MGD) Discharge Point 002: 392 MGD Discharge Point 003: 337 MGD
Facility Design Flow	Same as above
Watershed	San Gabriel River Watershed
Receiving Water	San Gabriel River Estuary
Receiving Water Type	Estuary

1.1. AES Alamitos LLC (Discharger) is the owner and operator of the Alamitos Generating Station (Facility) located on Studebaker Road in the city of Long Beach. 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.

1.2. The Facility discharges once-through cooling water and process wastewater to the San Gabriel River Estuary, a water of the United States, within the San Gabriel River Watershed. The Facility also discharges storm water runoff to the Los Cerritos Channel Estuary, a water of the United States, within the Los Cerritos Channel Watershed. The Discharger was previously regulated by Order R4-2015-0173 which was adopted on September 10, 2015 and expires on December 31, 2020.

1.3. The Discharger filed a report of waste discharge and submitted an application for issuance of its waste discharge requirements (WDRs) and NPDES permit on January 22, 2020. The application was deemed complete on February 20, 2020. A virtual site visit was conducted on May 19, 2020, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

1.5. Regulations at 40 CFR section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 5 of this Order limits the duration of the discharge authorization. However, pursuant to 40 CFR section 122.6 and 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.

1.6. On May 15, 2015, the Discharger submitted a written request for additional time to achieve compliance with the new effluent limitations contained in Order R4-2015-0173. Based on monitoring data the Regional Water Board found that interim effluent limitations were appropriate for total residual chlorine, temperature and copper. On September 10, 2015, the Regional Water Board adopted Time Schedule Order (TSO) R4-2015-0174 concurrently with the adoption of Order R4-2015-0173. TSO R4-2015-0174 included interim effluent limitations for total residual chlorine, temperature and copper.

1.7. On November 13, 2016, the Discharger submitted a written request for additional time to achieve compliance with the new effluent limitations for bacteria and storm water effluent limitations for total suspended solids contained in Order R4-2015-0173. Based on monitoring data, the Regional Water Board found that interim effluent limitations were appropriate for *enterococcus* and total suspended solids. On March 14, 2017, the Executive Officer issued TSO R4-2015-0174-A01 that amended TSO R4-2015-0174 to include interim effluent limitations for *enterococcus* and an interim storm water limitation for total suspended solids.

1.8. On March 12, 2018, the Discharger submitted a request to the Regional Water Board to modify the compliance deadlines stipulated by TSO R4-2015-0174-A01. The request discussed grid reliability issues involving the California Independent System Operator (CAISO), Southern California Edison (SCE) and the California Public Utilities Commission (CPUC). The Regional Water Board evaluated the request for modification of the compliance schedule and determined that the modification was appropriate. On

June 21, 2018, the Executive Officer issued TSO R4-2015-0174-A02 that amended TSO R4-2015-0174-A01 to include the revised compliance schedule. TSO R4-2015-0174-A02 included the interim limitations described above and expires on December 31, 2020.

2. FACILITY DESCRIPTION

The Facility is an electricity generating station with a capacity of approximately 1,135 megawatts. There are three active fossil-fueled, steam-powered electric generating units on-site: Units 3, 4 and 5. The generating units operate using once-through-cooling (OTC) water drawn from the Los Cerritos Channel Estuary using circulation pumps.

The Facility discharges OTC water and low-volume wastewater to the San Gabriel River Estuary through two discharge outfalls (Discharge Points 002 and 003) located along the eastern boundary of the property and the west bank of the river. OTC water accounts for greater than 99 percent of the total discharge from the Facility. Process wastewater is combined with OTC water prior to discharge. The ROWD submitted by the Discharger indicated a maximum discharge of 729 million gallons per day (MGD) from the two outfalls combined. The flow represents the maximum capacities of the cooling water systems combined with the maximum flows of all contributing in-plant waste streams.

Changes have occurred at the Facility since the adoption of Order R4-2015-0173. The Facility previously had six generating units with a total capacity of 2,093 megawatts. On December 31, 2019, the Discharger permanently shut down Units 1, 2 and 6. This decreased the maximum discharge from 1,271 MGD to 729 MGD. Units 1 and 2 discharged OTC water through Discharge Point 001. The Discharger has prevented further discharge to Discharge Point 001 by disabling the power supply to the circulation pumps for Units 1 and 2. The Facility has constructed two dry-cooled natural gas-fired combined cycle gas turbine (CCGT) power blocks to replace the retired units. These units began commercial operation on February 6, 2020. The Facility is also constructing a battery energy storage system. Requirements of this Order incorporate these changes.

2.1. Description of Wastewater and Biosolids Treatment and Controls

2.1.1. Once-through Cooling Water

Cooling water for the Facility is drawn from the Los Cerritos Channel Estuary and is discharged to the San Gabriel River Estuary. Units 3 and 4 withdraw cooling water from a cooling water intake structure located in a canal connected to the Los Cerritos Channel Estuary. Unit 5 withdraws cooling water from a second canal on the south end of the Facility, also connected to the Los Cerritos Channel Estuary. There are two intake forebays per unit which are equipped with curtain walls and traveling screens to prevent debris from entering the cooling water system. Circulating water pumps are located upstream of the traveling screens to convey flow to the condensers. The total maximum cooling water pumping capacity of the Facility is 729 million gallons per day (MGD).

Marine biofouling of the cooling water conduits and forebay is controlled by chlorine injection. Biofouling forms an insulating layer of slime-producing organisms. The Facility removes calcareous shell debris that accumulates within

the intake screen structure by performing manual pick and cleans when the circulation pumps are non-operative. Heat treatment was previously used to remove the calcareous shell debris but the Facility has not heat treated since 2002.

In addition to biofouling of the intake structure, the use of estuary water as OTC water can result in biofouling of the conduits and heat-transfer structures within the Facility. Biological growths which accumulate within these structures reduce the heat transfer efficiency of the condensers. Periodic chlorination of intake water is performed to control biological growths within the Facility.

2.1.2. **Internal Process Wastewater**

The Facility is permitted to discharge various process wastewaters which are commingled with OTC water prior to discharge. These permitted waste streams include the following:

2.1.2.1. **Low-Volume Wastewater**

Low-volume wastewater include wastewater from boiler blowdown, condenser overboard, reverse osmosis reject water and in-plant drains. Low-volume wastewater is collected in the North Retention Basin. All these waste streams are intermittent. The North Basin has a capacity of 825,000 gallons and discharges to Discharge Point 002. Low-volume wastewater is monitored at a location from the North Basin (INT-001A) where a representative sample of all low-volume wastewater can be obtained after treatment but prior to commingling with other internal process waste streams or OTC water. The Facility previously had two additional basins, the Central and South Basins. These two basins were demolished during the CCGT power block construction. The locations are now parking lots.

a. **Boiler Blowdown.** Water is occasionally removed from the boilers to control the buildup of total dissolved solids in the boiler. The sources of impurities in the boiler are the intake water; internal corrosion of the boiler; and chemicals added to the boiler system to control scale formation, corrosion, pH and solids deposition. Blowdown is necessary during startup, shutdown, and occasionally during normal operation. The flow rate and duration of the discharge water from the blowdown process can vary considerably. Boiler blowdown water from Unit 5 is discharged to the North Basin. Boiler blowdown water from Units 3 and 4 is discharged directly to Outfall 002.

b. **Condenser Overboard.** Condenser overboard discharges, which generally occur only during unit start-up, are primarily composed of condensed steam. Condenser overboard is directly discharged to Outfall 002 and does not undergo treatment.

c. **Reverse Osmosis Reject Water and Regeneration Wastes.** This discharge consists of reverse osmosis reject water and condenser demineralizer regeneration wastes used to purify water used in Facility

processes. These wastes are stabilized in the North Basin and then discharged to the receiving water.

d. **In-Plant Drains.** Power block floor drains from Units 3, 4 and 5 primarily collect equipment wash water and residual oil and detergent. Wastes collected within each power block are treated in the oil/water separators and the North Basin prior to discharge.

2.1.2.2. **Wastewater Previously Discharged**

a. **Metal Cleaning Wastes.** Metal cleaning wastes, both chemical and non-chemical, are periodically generated when the metallic surfaces of Facility systems are cleaned. The Facility previously discharged these wastes to the receiving water. The discharge of metal cleaning wastes has ceased, and these wastes are now contained and transported offsite to an authorized waste facility. This Order does not authorize the discharge of metal cleaning wastes to the receiving waters.

b. **Treated Sanitary Wastewater.** Order R4-2015-0173 included effluent limitations for sanitary wastewater that was treated on-site prior to discharge to the receiving waters. In September 2018, the Discharger constructed a sewer line and decommissioned the on-site treatment plant. The discharge of treated sanitary wastewater has therefore ceased and sanitary wastewater is now discharged to the Los Angeles County Sanitation Districts wastewater system. This Order does not authorize the discharge of sanitary wastewater to the receiving waters.

2.1.3. **Storm Water**

Storm water runoff at the Facility is predominantly collected in a conveyance system with berms where it can evaporate or be manually released to the Los Cerritos Channel Estuary.

2.2. Discharge Points and Receiving Waters

The Facility discharges OTC water commingled with internal process wastewater to the San Gabriel River Estuary through two channel bank outfalls along the western bank of the river. Discharge Point 002 discharges OTC water from Units 3 and 4. Discharge Point 003 discharges OTC water from Unit 5.

The San Gabriel River Estuary is located along the heavily urbanized Los Angeles-Orange County Line. The San Gabriel River Estuary is subject to requirements of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP), which is applicable to the inland surface waters, enclosed bays and estuaries of the state. This Order regulates the discharge of OTC water and process wastewater to the San Gabriel River Estuary and implements the SIP.

The Facility also discharges storm water runoff to the Los Cerritos Channel Estuary. Storm water monitoring is conducted at two sampling points. Point O-48 is

representative of the storm water runoff from the area around Units 1-4 and Point O-84 is representative of the storm water runoff from the area around Units 5 and 6. As previously discussed, Units 1, 2 and 6 are inactive as of December 31, 2020. The Facility previously discharged storm water through a third point, O-76. This discharge point was eliminated through the duration of the construction of the CCGT power blocks. Prior to beginning commercial operation of the CCGT power blocks, the CCGT units were registered under State Water Resources Control Board Order 2014-0057-DWQ (General Permit for Storm Water Discharges Associated with Industrial Activities). Monitoring and reporting of stormwater discharges from the area around the CCGT units is conducted under Order 2014-0057-DWQ.

The Los Cerritos Channel Estuary is located in heavily urbanized areas within the cities of Lakewood and Long Beach. This Order regulates the discharge of storm water runoff to the Los Cerritos Channel Estuary.

2.3. **Summary of Existing Requirements and SMR Data**

The effluent limitations from Order R4-2015-0173 for discharges from Discharge Points 002 and 003 and representative monitoring data are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Highest Average Monthly Discharge	Highest Daily Discharge
pH (Note a)	s.u.	---	6.5 – 8.5	---	6.7-8.4
Ammonia Nitrogen, Total (as N)	mg/L	0.567	1.333	---	0.064
Free Available Chlorine (Notes b and c)	mg/L	---	0.20	---	0.19
Total Residual Chlorine (Notes c and d)	mg/L	---	0.1	---	0.2
Copper, Total Recoverable, Dry Weather (Note e)	µg/L	2.7	4.6	8	30
Copper, Total Recoverable, Wet Weather (Note f)	µg/L	3.2	5.5	8	30
Nickel, Total Recoverable	µg/L	5.3	15	60	60
Bis(2-ethylhexyl) phthalate	µg/L	5.9	19	5.6	29
Chronic Toxicity (Note g)	Pass or Fail, % Effect	Pass (Note h)	Pass, or % Effect <50	---	Fail
Total Coliform (Note i)	mpn/100 ml	1,000	10,000	---	920
Fecal Coliform (Note i)	mpn /100 ml	200	400	---	240
Enterococcus (Note i)	mpn /100 ml	35	104	82	3,110
Temperature (Note j)	°F	---	86	---	108

Footnotes for Table F-2

a. The Highest Daily Discharge for pH is a range of instantaneous values.
b. The Maximum Daily Effluent Limitation is applied as a daily average.
c. Total residual chlorine and free available chlorine may not be discharged from any single generating unit for more than two hours per day unless the Discharger demonstrates to the

permitting authority that discharge for more than two hours per day is required for macroinvertebrate control.

d. If other oxidants are used, this shall be the total of all oxidants reported as residual chlorine.
e Dry weather is assumed for any discharge that occurs when the flow is less than 156 cubic feet per second (101 MGD) as measured at flow gauge F354-R in Coyote Creek operated by the Los Angeles County Department of Public Works.
f. Wet weather is assumed for any discharge that occurs when the flow is equal to or greater than 156 cubic feet per second (101 MGD) as measured at flow gauge F354-R in Coyote Creek operated by the Los Angeles County Department of Public Works.
g. Report “Pass” or “Fail” for Median Monthly Effluent Limitation (MMEL). Report “Pass” or “Fail” and “% Effect” for Maximum Daily Effluent Limitation (MDEL). During a calendar month, exactly three independent toxicity tests are required for routine monitoring when one toxicity test results in “Fail”.
h. This is a Median Monthly Effluent Limitation.
i. Effluent limitations for total coliforms, fecal coliforms and *enterocccus* are represented as Geometric Mean and Single Sample limitations with units of Most Probable Number (MPN) per 100 ml.
j. The maximum temperature shall not exceed the natural receiving water temperature by more than 20°F. The maximum temperature of thermal waste discharges shall not exceed 86°F.

End of Footnotes for Table F-2

Table F-3. Historic Effluent Limitations and Monitoring Data for Storm Water

Parameter	Units	Maximum Daily Effluent Limitation	Highest Daily Discharge
pH (Note a)	s.u.	6.5 – 8.5	6.3 – 8.9
Temperature	°F	86	79
Oil and Grease	mg/L	10	6
Total Suspended Solids	mg/L	75	430

Footnotes for Table F-3

a. The Highest Daily Discharge for pH is a range of instantaneous values.

End of Footnotes for Table F-3

2.4. Compliance Summary

Monitoring data submitted to the Regional Water Board during the effective term of Order R4-2015-0173 (from January 2016 through May 2020) indicate that the Discharger has violated numeric effluent limitations for discharges as outlined in the table below:

Table F-4. Effluent Limitation Violations

Date	Location	Type of Limitation	Pollutant	Units	Effluent Limitation	Result
01/07/2016	EFF-001	Instanta-neous Maximum	Temperature	° F	105 (Note a)	108
03/02/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn/ 100mL	104	214
03/06/2016	O-84	MDEL	TSS	mg/L	75	397
03/06/2016	O-76 (Note b)	MDEL	TSS	mg/L	75	89
03/07/2016	O-48	MDEL	TSS	mg/L	75	95
03/09/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	488
03/11/2016	O-84	MDEL	TSS	mg/L	75	188
03/16/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	411
03/23/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	158
03/30/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	629
03/31/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	336
6/1/2016	INT-002 (Note c)	MDEL	Settleable Solids	ml/L	0.3	0.35
06/01/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	115
06/08/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	2,420
06/15/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	1,200
06/22/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	466
06/29/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	1,990
6/30/2016	INT-002 (Note c)	MDEL	Settleable Solids	ml/L	0.3	0.35

Date	Location	Type of Limitation	Pollutant	Units	Effluent Limitation	Result
06/30/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	791
08/01/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	275
09/01/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	185
09/08/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	2,430
09/15/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn/ 100mL	104	1.990
09/22/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	1,300
09/29/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	613
09/30/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	935
11/01/2016	INT-002 (Note c)	MDEL	Settleable Solids	ml/L	0.3	0.55
11/21/2015	O-76 (Note b)	MDEL	TSS	mg/L	75	191
12/01/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	275
12/27/2016	EFF-002	Single Sample Maximum	*Enterococci*	mpn / 100mL	104	268
12/31/2016	EFF-002	Geometric Mean	*Enterococci*	mpn / 100mL	35	82
12/31/2016	EFF-001	Geometric Mean	*Enterococci*	mpn / 100mL	35	43
03/01/2017	EFF-003	MDEL	Copper	µg/L	9.3 (Note a)	30.1
03/31/2017	EFF-003	AMEL	Copper	µg/L	8 (Note a)	12.4
06/06/2017	EFF-003	Instanta-neous Maximum	pH	su	9	9.44

Date	Location	Type of Limitation	Pollutant	Units	Effluent Limitation	Result
09/01/2017	EFF-001	Single Sample Maximum	*Enterococci*	mpn / 100mL	2,429 (Note a)	3,110
11/27/2017	INT-002 (Note c)	MDEL	Settleable Solids	ml/L	0.3	0.5
03/20/2018	INT-002 (Note c)	MDEL	Settleable Solids	ml/L	0.3	0.4
10/02/2018	EFF-003	MDEL	Nickel	µg/L	15	27.1
10/31/2018	EFF-003	AMEL	Nickel	µg/L	5.3	27.1
05/03/2019	INT-001A	Instanta-neous Maximum	pH	su	9	9.2
05/06/2019	EFF-001	Instanta-neous Maximum	Temperature	° F	105 (Note a)	106.7
07/08/2019	INT-001A	Instanta-neous Maximum	pH	su	9	9.45
11/20/2019	O-48	MDEL	TSS	mg/L	385 (Note a)	430

Footnotes for Table F-4

a. Interim effluent limitation established by TSO R4-2015-0174-A02.
b. Discharge point O-76 was eliminated during the construction of the CCGT power blocks.
c. Violation of effluent limitation for treated sanitary wastes. In September 2018 the Discharger constructed a sewer line, decommissioned the on-site treatment plant and ceased the discharge of treated sanitary wastewater.

End of Footnotes for Table F-4

On October 20, 2016, the Regional Water Board issued the Discharger Settlement Offer R4-2016-0324 for $51,000 for violations of waste discharge requirements contained in Orders 00-082 and R4-2015-0173. On March 6, 2017, the Offer was amended to $90,000. The amended Offer considered 33 violations that occurred between July 2015 and December 2016 and assessed mandatory minimum penalties (MMPs) of $3,000 each for 30 of these violations. On June 22, 2017, the Regional Water Board received payment of $90,000.

On March 16, 2018, the Regional Water Board issued the Discharger Settlement Offer R4-2018-0017 for $12,000 for violations of waste discharge requirements contained in Order R4-2015-0173. The Offer considered five violations that occurred between March 2017 and November 2017 and assessed MMPs of $3,000 each for four of these violations. On April 24, 2018, the Regional Water Board received payment of $12,000.

On October 15, 2019, the Regional Water Board issued the Discharger Settlement Offer R4-2019-0113 for $6,000 for violations of waste discharge requirements contained in Order R4-2015-0173. The Offer considered six violations that occurred between February

2018 and May 2019 and assessed MMPs of $3,000 each for two of these violations. On February 6, 2020, the Regional Water Board received payment of $6,000.

Violations occurring after July 2019 are under consideration by the Regional Water Board for enforcement action.

2.5. Planned Changes

The Discharger indicates that changes are planned to comply with the requirements of Clean Water Act Section 316(b). These changes are discussed in Section 3.3.12 below.

3. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

3.1. Legal Authorities

This Order serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the 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 authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 of the Order subject to the WDRs in this Order.

3.2. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from CEQA. See also *County of Los Angeles v. State Water Resources Control Board* (2006) 143 Cal.App.4th 985, 1007.

3.3. State and Federal Laws, Regulations, Policies, and Plans

3.3.1. **Water Quality Control Plan.** The *Water Quality Control Plan for the Los Angeles Region* (hereinafter Basin Plan) 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. Beneficial uses applicable to the San Gabriel River Estuary and Los Cerritos Channel Estuary are as follows:

Table F-5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
002, 003	San Gabriel River Estuary	Existing: Industrial service supply (IND); navigation (NAV); water contact recreation (REC-1); non-contact water recreation (REC-2); commercial and sport fishing (COMM); estuarine habitat (EST); marine habitat (MAR); wildlife habitat (WILD);

Discharge Point	Receiving Water Name	Beneficial Use(s)
		rare, threatened, or endangered species (RARE); migration of aquatic organisms (MIGR); spawning, reproduction, and/or early development (SPWN) <u>Potential:</u> Shellfish harvesting (SHELL)
O-48, O-84	Los Cerritos Channel Estuary	<u>Existing:</u> Industrial service supply (IND); navigation (NAV); water contact recreation (REC-1); non-contact water recreation (REC-2); commercial and sport fishing (COMM); estuarine habitat (EST); marine habitat (MAR); wildlife habitat (WILD); rare, threatened, or endangered species (RARE); migration of aquatic organisms (MIGR); spawning, reproduction, and/or early development (SPWN); shellfish harvesting (SHELL)

3.3.2. **Enclosed Bays and Estuaries Policy.** The Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Enclosed Bay and Estuaries Policy), adopted by the State Water Resources Control Board (State Water Board) as Resolution No. 95- 84 on November 16, 1995, states that:

"It is the policy of the State Water Board that the discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a Regional Water Board only when the Regional Water Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge."

While the Facility discharges to the San Gabriel River Estuary, the discharge is comprised primarily of once-through cooling water (approximately 99 percent), and therefore is not considered to be industrial process wastewater. Nonetheless, this Order contains provisions necessary to protect all beneficial uses of the receiving water.

While the Facility discharges into the Los Cerritos Channel Estuary, the discharge is comprised of storm water runoff, and therefore is not considered to be industrial process wastewater. Nonetheless, this Order contains provisions necessary to protect all beneficial uses of the receiving water.

3.3.3. **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 May 18, 1972, and again on September 18, 1975 (Resolution No. 75-89). This plan contains temperature objectives for coastal and interstate waters and enclosed bays and estuaries of California. The Facility, as presently operating, is

considered an existing discharge per Definition 10 of the Thermal Plan. Water Quality Objective 5A of the Thermal Plan is applicable to existing thermal discharges to the estuaries of California and therefore applicable to discharges from the Facility:

5A(1) Elevated temperature waste discharges shall comply with the following:

a. The maximum temperature shall not exceed the natural receiving water temperature by more than 20°F.

b. Elevated temperature waste discharges either individually or combined with other discharges shall not create a zone, defined by water temperature of more than 1°F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of a main river channel at any point.

c. No discharge shall cause a surface water temperature rise greater than 4°F above the natural temperature of the receiving waters at any time or place.

d. Additional limitations shall be imposed when necessary to assure protection of beneficial uses.

5A(2) Thermal waste discharges shall comply with the provisions of 5A(1) above and, in addition, the maximum temperature of thermal waste discharges shall not exceed 86°F.

Requirements of this Order implement the Thermal Plan.

3.3.4. **Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries in California – Part 3 Bacteria Provisions (Bacteria Provisions).** On August 7, 2018, the State Water Resources Control Board adopted Resolution Number 2018-0038, "*Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Bacteria Provisions and a Water Quality Standards Variance Policy and an Amendment to the Water Quality Control Plan for Ocean Waters of California"* (Bacteria Provisions). The Bacteria Provisions: (1) establish a beneficial use definition of limited water contact recreation (LREC-1); (2) establish new statewide numeric water quality objectives for bacteria to protect primary contact recreation (REC-1) beneficial use; (3) include implementation elements; and (4) create a water quality standards variance framework under provisions established by the U.S. EPA. The Office of Administrative Law (OAL) approved the regulatory action on February 4, 2019. On March 22, 2019 U.S. EPA approved the Bacteria Provisions and they became effective. This Order implements the applicable numeric water quality objectives for bacteria included in the Bacteria Provisions.

3.3.5. **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, which is codified in 40 CFR section 131.38. 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 applicable to all surface waters in California.

3.3.6. **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.

3.3.7. **Antidegradation Policy.** Federal regulation 40 CFR 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 CFR section 131.12 and State Water Board Resolution 68-16. Requirements of this Order implement federal and state antidegradation policies as described in section 4.4.2 of this Fact Sheet.

3.3.8. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR 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. Requirements of this Order implement federal anti-backsliding requirements as described in section 4.4.1 of this Fact Sheet.

3.3.9. **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, including protecting rare, threatened, or endangered species. The Discharger is responsible for meeting all requirements of the applicable federal and state Endangered Species Acts.

3.3.10. **Trash Amendments.** 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 Number 2015-0019, which was approved by the Office of Administrative Law (OAL) on December 2, 2015 and became effective upon U.S. EPA approval on January 12, 2016. The Trash Provisions established a narrative water quality objective and a prohibition on the discharge of trash, to be implemented through permits issued pursuant to CWA section 402(p), waste discharge requirements, or waivers of waste discharge requirements.

The Trash Amendments apply to all surface waters of the State, with the exception of those waters within the jurisdiction of the Regional Water Board where trash or debris Total Maximum Daily Loads (TMDLs) are in effect prior to the effective date of the Trash Provisions. There are currently no Trash TMDLs for the Los Cerritos Channel Estuary or its tributaries, therefore the discharges described in this Order are subject to the Trash Amendments. This Order incorporates the requirements of the Trash Amendments through the prohibition of trash discharges to Discharge Points O-48 and O-84. This Order also requires the Discharger to develop and implement a Storm Water Pollution Prevention Plan (SWPPP), which shall include specific Best Management Practices (BMPs) used as storm water control measures that the Discharger will undertake to prevent the discharge of trash from the Facility to the Los Cerritos Channel Estuary. The Discharger is required to detail and submit to the Regional Water Board the SWPPP.

3.3.11. **Mercury Provisions.** The State Water Board adopted *"Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California- Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions"* (Mercury Provisions) through Resolution 2017-0027, which was approved by OAL on June 28, 2017 and became effective upon U.S. EPA approval on July 14, 2017. The Mercury Provisions are implemented through NPDES permits issued pursuant to CWA section 402, waste discharge requirements, or waivers of waste discharge requirements. The Provisions included specific implementation provisions for individual non-storm water NPDES permits for municipal and industrial dischargers; storm water discharges regulated by Municipal Separate Storm Sewer System (MS4) permits and the NPDES General Permit for Storm Water Discharges Associated with Industrial Activities (CAS000001 or Industrial General Permit); as well as storm water from mine site remediation sites; dredging activities; wetland projects and nonpoint source discharges. This Order implements the requirements in the Mercury Provisions for individual non-storm water NPDES permits.

3.3.12. **Clean Water Act Section 316(b) – Impingement and Entrainment.** CWA section 316(b) requires that the location, design, construction and capacity of cooling water intake structures reflect the Best Technology Available (BTA) for minimizing adverse environmental impacts related to entrainment (drawing

organisms into the cooling water system) and impingement (trapping organisms against the intake screens).

On May 4, 2010, the State Water Board adopted a Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (OTC Policy). The OTC Policy was approved by the Office of Administrative Law (OAL) on September 27, 2010. The OTC Policy became effective on October 1, 2010.

The OTC Policy establishes technology-based standards to implement federal CWA section 316(b) and reduce the harmful effects associated with cooling water intake structures on marine and estuarine life. The OTC Policy applies to existing power plants that currently have the ability to withdraw water from the State's coastal and estuarine waters using a single-pass system, also known as once-through cooling. Closed-cycle wet cooling has been selected as BTA.

The Policy requires compliance under two alternatives:

a. Track 1, where an owner or operator of an existing power plant must reduce intake flow rate at each unit, at a minimum, to a level commensurate with that which can be attained by a closed-cycle wet cooling system. A minimum 93 percent reduction in intake flow rate for each unit is required for Track 1 compliance, compared to the unit's design intake flow rate. The through-screen intake velocity must not exceed 0.5 foot per second. The installation of closed cycle dry cooling systems meets the intent and minimum reduction requirements of this compliance alternative, or

b. Track 2, where an owner or operator of an existing power plant demonstrates to the State Water Board's satisfaction that compliance with Track 1 is not feasible, the owner or operator of an existing power plant must reduce impingement mortality and entrainment of marine life for the facility, on a unit-by-unit basis, to a comparable level to that which would be achieved under Track 1, using operational or structural controls, or both.

All owners or operators of existing power plants were required to submit an implementation plan identifying the OTC compliance alternative selected by April 1, 2011. The Discharger submitted an implementation plan on April 1, 2011. A revised implementation plan was later submitted on June 17, 2011. Additional implementation information was submitted on March 31, 2013 and November 8, 2013. Per the submitted information, the Discharger has indicated that the proposed mechanism to bring all its units (1, 2, 3, 4, 5, and 6) into OTC compliance will be via Track 1.

The Track 1 compliance consists of the construction of dry-cooled natural gas fired combined cycle gas turbine (CCGT) power blocks. On December 31, 2019, the Discharger permanently shut down Units 1, 2 and 6 and disabled the power supply to the circulation pumps. The Facility constructed two dry-cooled natural gas fired combined cycle gas turbine (CCGT) power blocks to replace the retired units. These units began commercial operation on February 6, 2020. A battery energy storage system is currently under construction at the Facility. Four

simple-cycle gas turbine units are currently licensed with the California Energy Commission but have not yet began construction. The OTC Policy established a final compliance date (Final Compliance Date) of December 31, 2020 to permanently shut down Units 3, 4 and 5.

The joint-agency Statewide Advisory Committee on Cooling Water Intake Structures (SACCWIS) was created to advise the State Water Board on the implementation of the OTC Policy, ensuring the compliance schedule takes into account the reliability of California's electricity supply. On January 23, 2020, the SACCWIS approved a compliance date extensions report and voted in favor of a recommendation to the State Water Board that included an extension of the Final Compliance Date for Alamitos Generating Station for three years until December 31, 2023. The SACCWIS recommendation was based on the megawatt need identified in California Public Utilities Commission (CPUC) Decision (D.)19-11-016. On September 1, 2020, the State Water Board considered the SACCWIS recommendation and adopted an amendment to the OTC Policy that extended the Final Compliance Date for the Discharger until December 31, 2023. If the amendment to the OTC Policy is approved by the Office of Administrative Law (OAL), this Order implements the Final Compliance Date of December 31. 2023,

Therefore, the Discharger must achieve full compliance with the OTC Policy by permanently shutting down Units 3, 4 and 5 by the Final Compliance Date for the Facility established in Section 3.E, Table 1 of the OTC Policy, or any later date established in accordance with the Final Compliance Date suspension provisions in Section 2.B(2) of the OTC Policy.

3.4. **Impaired Water Bodies on the CWA section 303(d) List**

Section 303(d) of the Clean Water Act (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 develops and adopts Total Maximum Daily Loads (TMDLs) that specify waste load allocations (WLA) for point sources and load allocations (LAs) for non-point sources, as appropriate.

The U.S. EPA approved the California 2014-2016 CWA section 303(d) List of Impaired Waters (2014-16 303(d) List) on April 6, 2018. Certain receiving waters in the Los Angeles Region do not fully support beneficial uses and therefore have been classified as impaired on the 2014-16 303(d) List and have been scheduled for TMDL development. The Facility discharges into the San Gabriel Estuary. The 2014-16 303(d) List classifies the San Gabriel Estuary as impaired. The pollutants of concern in the estuary include: copper, dioxin, indicator bacteria, nickel, and dissolved oxygen. The inclusion of the San Gabriel Estuary on the 2014-16 303(d) documents the waterbody's lack of assimilative capacity for the pollutants of concern. TMDLs have been developed for copper and indicator bacteria. TMDLs will be developed for the other pollutants of concern in accordance with CWA section 303(d) to facilitate the waterbody's recovery of its ability to fully support beneficial uses.

The Facility also discharges storm water runoff to the Los Cerritos Channel Estuary. The 2014-16 303(d) List classifies the freshwater portion of Los Cerritos Channel as impaired. The pollutants of concern are: ammonia, bis(2-ethylhexyl) phthalate, chlordane (sediment), indicator bacteria, copper, lead, pH, trash, and zinc. The freshwater portion of Los Cerritos Channel is upstream of the storm water discharge from this Facility. The 2014-16 303(d) List also classifies Alamitos Bay, which is downstream of the estuary and the Facility, as impaired. The pollutants of concern include indicator bacteria and dissolved oxygen. The inclusion of the Los Cerritos Channel and Alamitos Bay on the 2014-16 303(d) List documents the waterbodies' lack of assimilative capacity for the pollutants of concern. TMDLs have been developed for copper, lead, and zinc in the Los Cerritos Channel. TMDLs will be developed for the other pollutants of concern.

As noted above, there are several TMDLs that have already been established that apply to the San Gabriel River Estuary and the Los Cerritos Channel Estuary, including:

3.4.1. **San Gabriel River Metals and Selenium TMDL.** The U.S. EPA established the *Total Maximum Daily Loads for Metals and Selenium, San Gabriel River and Impaired Tributaries* (San Gabriel River Metals and Selenium TMDL) on March 26, 2007. The Regional Water Board adopted Resolution No. R13-004 on June 6, 2013 that amended the Basin Plan to incorporate the Implementation Plan for the San Gabriel River Metals and Selenium TMDL. The San Gabriel River Metals and Selenium TMDL Implementation Plan was approved by the Office of Administrative Law on October 13, 2014. The TMDL's compliance schedule authorizing provisions were approved by U.S. EPA on May 11, 2017. The TMDL contains requirements applicable to this discharge. Therefore, this Order contains effluent limitations and monitoring requirements based on the TMDL.

3.4.2. **Los Cerritos Channel Metals TMDL.** The U.S. EPA established the *Los Cerritos Channel Total Maximum Daily Loads for Metals* (Los Cerritos Channel Metals TMDL) on March 17, 2010. The Regional Water Board adopted Resolution No. R13-004 on June 6, 2013 that amended the Basin Plan to incorporate the Implementation Plan for the Los Cerritos Channel Metals TMDL. The Los Cerritos Channel Metals TMDL Implementation Plan was approved by the Office of Administrative Law on October 13, 2014. The TMDL's compliance schedule authorizing provisions were approved by U.S. EPA on May 11, 2017. The TMDL contains requirements applicable to the freshwater portion of Los Cerritos Channel. The discharge from this Facility is to the Los Cerritos Estuary downstream of the portion of Los Cerritos Channel addressed by the TMDL. Therefore, this Order does not contain requirements based on the TMDL.

3.4.3. **Harbor Toxics TMDL.** The Regional Water Board adopted Resolution No. R11-008 on May 5, 2011, that amended the Basin Plan to incorporate the *TMDL for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters* (Harbor Toxics TMDL). The Harbor Toxics TMDL was approved by the State Water Board on February 7, 2012, the OAL on March 21, 2012, and the U.S. EPA on March 23, 2012. The Harbor Toxics TMDL contains monitoring requirements applicable to responsible parties identified in the San

Gabriel River Metals and Selenium TMDL. Therefore, this Order contains monitoring requirements based on the TMDL. These requirements are discussed below.

3.4.3.1. **Water Column Monitoring.** Water samples and total suspended solids samples (TSS) shall be collected at, at least one site during two wet weather events and one dry weather event each year. The first storm event that has a predicted rainfall of 0.25 inch (within 24 hour period) and at least 70% probability of rainfall at least 24 hours prior to the event shall be monitored as a wet weather event. An additional wet weather event shall be monitored. Depending on forecasts (drought year vs. wet year) this event must produce at least 0.1 inch of runoff preceded by a 72-hour dry period. Consideration will be given to monitor "larger storm events" (greater than 0.5 inch) if forecasted. Water samples and TSS samples shall be analyzed for metals, DDT, PCBs, and PAHs. Sampling shall be designed to collect sufficient volumes of suspended solids to allow for analysis of the listed pollutants in the bulk sediment.

General water chemistry (temperature, dissolved oxygen, pH, and electrical conductivity) and a flow measurement shall be required at each sampling event. General chemistry measurements may be taken in the laboratory immediately following sample collection if auto samplers are used for sample collection or if weather conditions are unsuitable for field measurements.

Monitoring station RSW-001 is located at the mouth of the San Gabriel River. Therefore, this Order establishes Harbor Toxics TMDL water column monitoring requirements at monitoring station RSW-001.

3.4.3.2. **Sediment Monitoring.** The Harbor Toxics TMDL states that sediment samples shall be collected at, at least one site every two years for analysis of general sediment quality constituents and the full chemical suite as specified in *State Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (SQO Part 1).* All samples shall be collected in accordance with SWAMP protocols.

This Order retains annual sediment monitoring requirements from Order R4-2015-0173 at monitoring stations BEN-001 to BEN-008. Monitoring station BEN-001 is located at the mouth of the San Gabriel River directly below monitoring station RSW-001. The sediment monitoring requirements retained for monitoring station BEN-001 exceed and therefore satisfy the sediment monitoring requirements established in the Harbor Toxics TMDL.

3.5. Other Plans, Polices and Regulations

Climate Change Adaptation and Mitigation. On March 7, 2017, the State Water Board adopted a resolution in recognition of the challenges posed by climate change that requires a proactive approach to climate change in all State Water Board actions, including drinking water regulation, water quality protection, and financial assistance (Resolution No. 2017-0012). The resolution lays the foundation for a response to climate

change that is integrated into all State Water Board actions, by giving direction to the State Water Board divisions and encouraging coordination with the Regional Water Boards. On May 10, 2018, the Regional Water Board also adopted "A Resolution to Prioritize Actions to Adapt to and Mitigate the Impacts of Climate Change on the Los Angeles Region's Water Resources and Associated Beneficial Uses" (Resolution No. R18-004). The resolution summarizes the steps taken so far to address the impacts of climate change within the Regional Water Board's programs and lists a series of steps to move forward. These include the identification of potential regulatory adaptation and mitigation measures that could be implemented on a short-term and long-term basis by each of the Regional Water Board's programs to take into account, and assist in mitigating where possible, the effects of climate change on water resources and associated beneficial uses. This Order contains provisions to require planning and actions to address climate change impacts in accordance with both the State and Regional Water Boards' resolutions.

If and when an ROWD is submitted for permit renewal, the Permittee shall develop a Climate Change Effects Vulnerability Assessment and Management Plan (Climate Change Plan) and submit the Climate Change Plan to the Regional Water Board for the Executive Officer's approval with the permit application. The Climate Change Plan shall include an assessment of short and long term vulnerabilities of the facility and operations as well as plans to address vulnerabilities of collection systems, facilities, treatment systems, and outfalls for predicted impacts in order to ensure that facility operations are not disrupted, compliance with permit conditions is achieved, and receiving waters are not adversely impacted by discharges. Control measures shall include, but are not limited to, emergency procedures, contingency plans, alarm/notification systems, training, backup power and equipment, and the need for planned mitigations to ameliorate climate-induced impacts including, but not limited to, changing influent and receiving water quality and conditions, as well as the impact of rising sea level (where applicable), wildfires, storm surges and back-to-back severe storms that are expected to become more frequent.

4. 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 CFR section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

Pollutants of concern for the discharges covered under this Order were based on effluent monitoring data, constituents regulated under Order R4-2015-0173, TMDLs, and the pollutants on the 303(d) list for the San Gabriel Estuary and Alamitos Bay. Order R4-2015-0173 included effluent limitations for pH, ammonia, free available chlorine, total residual

chlorine, copper, nickel, bis(2-ethylhexyl) phthalate, chronic toxicity, radioactivity, bacteria, and temperature.

4.1. Discharge Prohibitions

Discharge Prohibitions in this Order are based on the federal CWA, the CFR, the Basin Plan, the Water Code, State Water Board's plans and policies, U.S. EPA guidance and regulations, and the previous permit provisions. This Order includes a prohibition for trash in order to implement the statewide Trash Provisions. The discharge of PCBs is prohibited based on the standards applicable to steam-electric generating facilities contained in 40 CFR part 423. The discharge prohibitions included in this Order are consistent with the requirements set for other dischargers within the Los Angeles Region that are regulated by NPDES permits.

4.2. Technology-Based Effluent Limitations

4.2.1. **Scope and Authority**

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 CFR 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 Effluent Limitations Guidelines and Standards (ELGs) for the steam electric power point source category in 40 CFR part 423.

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

4.2.1.1. 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.

4.2.1.2. 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.

4.2.1.3. 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 first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.

4.2.1.4. 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 ELGs representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR 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 CFR section 125.3.

4.2.2. **Applicable Technology-Based Effluent Limitations**

Pursuant to CWA section 306 (b) (1) (B), U.S. EPA has established standards of performance for the steam electric power point source category, for existing and new sources at 40 CFR part 423. These regulations apply to the Facility as "*an establishment primarily engaged in the generation of electricity for distribution and sale which results primarily from a process utilizing fossil-type fuel … in conjunction with a thermal cycle employing the steam water system as the thermodynamic medium*" (40 CFR section 423.10). Standards of performance for existing facilities (instead of new source performance standards) are applicable to the Facility because its construction was commenced before the publication of regulations on November 19, 1982, which proposed standards of performance for the industry.

40 CFR part 423 contains ELGs applicable to the following process waters: low volume wastes, fly ash transport water, bottom ash transport water, metal cleaning wastes (both chemical and non-chemical), once-through cooling water, cooling tower blowdown, and discharges of coal pile runoff. Of these, the ELGs that apply to discharges from this Facility include low-volume wastes and once-through cooling water. The table below lists the Facility's waste streams subject to the ELGs for steam electric power generating point sources.

Table F-6. Plant Waste Streams Subject to Effluent Limitation Guidelines

Waste Stream	ELG Classification
Units 3, 4 and 5 once-through cooling water	Once-through cooling water
Units 3, 4 and 5 boiler blowdown	Low-volume waste source
Units 3, 4 and 5 condenser overboard	Low-volume waste source
Reverse osmosis reject water	Low-volume waste source
In-plant drains	Low-volume waste source
Storm water runoff	Not subject to ELG

4.2.2.1. **Applicable ELGs Based on BPT.** Applicable ELGs established on the basis of BPT are summarized as follows:

i. The pH of all discharges, except once-through cooling water, shall be within the range of 6.0 – 9.0 standard units [40 CFR section 423.12 (b) (1)].

ii. There shall be no discharge of polychlorinated biphenyl (PCB) compounds such as those commonly used for transformer fluid [40 CFR section 423.12 (b) (2)].

iii. *Low volume wastes* are defined as wastewater sources for which specific limitations are not established by the effluent limitation guidelines at 40 CFR part 423. The quantity of pollutants discharged from low volume waste sources shall not exceed the quantity determined by multiplying the flow of the low volume waste sources times the concentration listed in the following table [40 CFR section 423.12 (b) (3)]:

Table F-7. BPT Effluent Limitation Guidelines for Low Volume Wastes

Pollutant	Units	AMEL	MDEL
Total suspended solids (TSS)	mg/l	30	100
Oil and grease	mg/l	15	20

iv. *Once-through cooling water* is defined as water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat. The quantity of pollutants discharged in once through cooling water shall not exceed the quantity determined by multiplying the flow of once through cooling water sources times the concentration listed in the following table [40 CFR section 423.12 (b) (6)]:

Table F-8. BPT Effluent Limitation Guidelines for Once-through Cooling Water

Pollutant	Units	MDEL	Maximum
Free available chlorine	mg/l	0.2	0.5

v. Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Water Board that the units in a particular location cannot operate at or below this level or chlorination [40 CFR section 423.12 (b) (8)].

vi. At the permitting authority's discretion, the quantity of pollutant allowed to be discharged may be expressed as a concentration limitation

instead of the mass-based limitations specified in this section. Concentration limitations shall be those concentrations specified in this section [40 CFR section 423.12 (b) (12)].

vii. In the event that waste streams from various sources are combined for treatment or discharge, the quantity of each pollutant attributable to each controlled waste source shall not exceed the specified limitations for that waste source [40 CFR section 423.12 (b) (13)].

4.2.2.2. **ELGs Based on BAT.** Applicable ELGs established on the basis of BAT are summarized as follows:

i. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid [40 CFR section 423.13 (a)].

ii. For any plant with a total rated electric generating capacity of 25 or more megawatts:

(a) The quantity of pollutants discharged in once through cooling water from each discharge point shall not exceed the quantity determined by multiplying the flow of once through cooling water from each discharge point times the concentration listed in the following table [40 CFR section 423.13 (b) (1)]:

Table F-9. BAT Effluent Limitation Guidelines for Once-through Cooling Water

Pollutant	Units	AMEL	MDEL
Total residual chlorine	mg/l	---	0.2

(b) Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the Discharger demonstrates to the permitting authority that discharge for more than two hours per day is required for macroinvertebrate control [40 CFR section 423.13 (b) (2)].

iii. At the permitting authority's discretion, the quantity of pollutant allowed to be discharged may be expressed as a concentration limitation instead of the mass-based limitations specified in this section. Concentration limitations shall be those concentrations specified in this section [40 CFR section 423.13 (m)].

4.2.2.2. **Technology-Based Effluent Limitations for Storm Water.** There are currently no ELGs that apply to the discharge of storm water runoff from this Facility to the Los Cerritos Channel Estuary. Order R4-2015-0173 established a technology-based effluent limitation (TBEL) for oil and grease of 15 mg/l. Monitoring data indicates that the Discharger complied with the TBEL for oil and grease using existing processes and facilities. Therefore, the TBEL for oil and grease is retained in this Order. In retaining this TBEL,

the Regional Water Board used BPJ and considered the factors listed in 40 CFR section 125.3(d) and chose to apply BCT as demonstrated below:

Table F-10. BCT Factors for Oil and Grease (40 CFR section 125.3(d)(2))

Factors	Considerations
(i) The reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived	The cost of imposing this limit is reasonable given that the Discharger can comply without modifying its proposed processes.
(ii) The comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources	The treatment cost and level of reduction of this pollutant from this Facility is significantly less than the secondary treatment cost and level of reduction from publicly owned treatment works.
(iii) The age of equipment and facilities involved	This limit can be met with proposed equipment and facilities.
(iv) The process employed	This limit can be met with proposed processes.
(v) The engineering aspects of the application of various types of control techniques	The proposed controls are practicable and capable of meeting this limit.
(vi) Process changes	No process changes are required to meet this limit.
(vii) Non-water quality environmental impact (including energy requirements)	Because no process changes are necessary, no non-water quality environmental impacts are foreseeable.

Order R4-2015-0173 established a TBEL of 75 mg/l for TSS based on BPJ using BCT factors. This Order replaces the TBEL for TSS for storm water runoff from this Facility to the Los Cerritos Channel Estuary with a numerically equivalent water quality-based effluent limitation based on Basin Plan water quality objectives.

4.2.2.3. Summary of Technology-Based Effluent Limitations

Effluent limitations in 40 CFR section 423.12(b)(11) and section 423.13(g) specify that, at the permitting authority's discretion, effluent limitations may be expressed as a concentration-based limitation instead of the mass-based limitations otherwise specified. Consistent with the prior order, technology-based effluent limitations in this Order are expressed as concentration-based limitations. Effluent limitations are specific to the type of discharge. The discharge of PCBs is prohibited for all types of discharge. A summary of the technology-based effluent limitations applicable to this Facility is shown in the tables below:

Table F-11. Technology-Based Effluent Limitations for Once-through Cooling Water

Pollutant	Units	MDEL	Maximum
Free available chlorine (Note a)	mg/l	0.2	0.5
Total residual chlorine (Note a)	mg/l	0.2	---

Footnotes for Table F-11

a. Total residual and free available chlorine may not be discharged from any single generating unit for more than two hours per day unless the Discharger demonstrates to the permitting authority that discharge for more than two hours per day is required for macroinvertebrate control. The MDEL for free available chlorine is applied as a daily average.

End of Footnotes for Table F-11

Table F-12. Technology-Based Effluent Limitations for Low Volume Wastes

Pollutant	Units	AMEL	MDEL	Minimum	Maximum
TSS	mg/l	30	100	---	---
Oil and grease	mg/l	15	20	---	---
pH	s.u.	---	---	6.0	9.0

Table F-13. Technology-Based Effluent Limitations for Storm Water Runoff to the Los Cerritos Channel Estuary

Pollutant	Units	AMEL	MDEL	Minimum	Maximum
Oil and grease	mg/l	---	15	---	---

4.3. Water Quality-Based Effluent Limitations (WQBELs)

4.3.1. Scope and Authority

CWA Section 301(b) and 40 CFR 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 CFR 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, water quality-based effluent limitations (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 Waste Load Allocations (WLAs).

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.

The specific procedures for determining reasonable potential and, if necessary, for calculating WQBELs are contained in U.S. EPA's *Technical Support Document For Water Quality-based Toxics Control* (EPA/505/2-90-001,1991) (TSD) for storm water discharges and in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Plan or SIP) for non-storm water discharges. Hence, in this Order, the SIP methodology is used to evaluate reasonable potential for the discharge of OTC water commingled with internal process wastewater to the San Gabriel River Estuary through Discharge Points 002 and 003. A reasonable potential analysis was not conducted for the stormwater discharge to Los Cerritos Channel Estuary due to the limited number of samples and the unrepresentative conditions under which the stormwater discharge samples were collected. Therefore WQBELs were not calculated for the stormwater discharges from Discharge Points O-48 and O-84.

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

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 San Gabriel River Estuary and Los Cerritos Channel Estuary are summarized in section 3.3.1 of this Fact Sheet. The discharges go to the San Gabriel River Estuary and Los Cerritos Channel Estuary (stormwater only). The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving waters.

Priority pollutant water quality criteria in the CTR are applicable to these waterbodies. 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 40 CFR 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 salinity in both waterbodies exceeds 1 ppt. Therefore, the CTR criteria for saltwater aquatic life or human health for consumption of organisms, whichever is more stringent, are the applicable criteria to protect the beneficial uses.

The table below summarizes the applicable water quality criteria/objectives for priority pollutants reported in detectable concentrations in the effluent discharged from Discharge Points 002 and 003 or San Gabriel River Estuary during the most recent discharges.

Table F-14. Applicable Water Quality Criteria

CTR Number	Constituent	Selected Criteria (µg/L)	CTR Acute Criteria (µg/L)	CTR Chronic Criteria (µg/L)	CTR Human Health Criteria for Consumption of Organisms only (µg/L)
1	Antimony	4,300	---	---	4,300
2	Arsenic	36	69	36	---
6	Copper	3.7	5.8	3.7	---
7	Lead	8.5	220	8.5	---
9	Nickel	8.3	75	8.3	4,600
10	Selenium	71	290	71	---
11	Silver	2.2	2.2	---	---
13	Zinc	86	95	86	---
20	Bromoform	360	---	---	360
22	Chlorobenzene	21,000	---	---	21,000
39	Toluene	200,000	---	---	200,000
68	Bis(2-Ethylhexyl)Phthalate	5.9	---	---	5.9
75	1,2-Dichlorobenzene	17,000	---	---	17,000
76	1,3-Dichlorobenzene	2,500	---	---	2,600

4.3.3. **Determining the Need for WQBELs**

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 an applicable TMDL-based WLA, then WQBELs are developed using the WLA pursuant to 40 CFR section 122.44(d)(1)(vii)(B). 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 criteria and objectives (C) contained in the CTR, NTR, and/or the Basin Plan. For all pollutants that have a reasonable potential to cause or contribute to an excursion above a state water quality standard in the receiving water, numeric WQBELs are required.

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 an RPA:

Trigger 1 – if MEC ≥ C, a limit is needed.

Trigger 2 – If the background concentration B > C and the pollutant is detected in the effluent, a limit is needed.

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.

The RPA was performed using data collected by the Discharger at Monitoring Location EFF-001 during the effective term of Order Number R4-2015-0173 (from January 2016 through May 2020). Based on the RPA, pollutants that demonstrate reasonable potential are copper, nickel and bis(2-ethylhexyl) phthalate. The table below summarizes results from the RPA. Only CTR pollutants that were detected in the effluent or receiving water are included in the table.

Table F-15. Summary of Reasonable Potential Analysis (Discharge Points 002 and 003)

CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
1	Antimony	4,300	0.1	1.57	No	MEC<C
2	Arsenic	36	1.71	5.27	No	MEC<C
6	Copper	3.7	30	9.4	Yes	MEC>C
7	Lead	8.5	0.44	0.94	No	MEC<C
9	Nickel	8.3	90	9.6	Yes	MEC>C
10	Selenium	71	1.8	26	No	MEC<C
11	Silver	2.2	0.5	1.8	No	MEC<C
13	Zinc	86	14	33	No	MEC<C
20	Bromoform	360	0.2	0.56	No	MEC<C
22	Chlorobenzene	21,000	0.082	---	No	MEC<C
39	Toluene	200,000	0.085	0.12	No	MEC<C
68	Bis(2-Ethylhexyl) Phthalate	5.9	29	---	Yes	MEC>C
75	1,2-Dichlorobenzene	17,000	0.12	---	No	MEC<C
76	1,3-Dichlorobenzene	2,500	0.2	---	No	MEC<C

As discussed in section 3.3.11 above, this Order implements the Mercury Provisions. Table 1 of the Mercury Provisions establishes a mercury objective of

12 ng/L (0.012 µg/L) for flowing water bodies with WILD, MAR and/or RARE beneficial use designations such as the San Gabriel River Estuary. The Mercury Provisions outline Reasonable Potential Analysis procedures that consist of comparing the highest observed annual average mercury concentration with the Table 1 objective. Regional Water Board staff reviewed monitoring data for the last four complete years of discharge (2016 through 2019). Mercury was sampled annually and detected once, during 2019, at a concentration of 0.58 µg/L. Therefore, the Facility demonstrates reasonable potential to cause or contribute to the exceedance of the water quality objective and an effluent limitation for mercury of 0.012 µg/L, applied as an annual average, is established in this Order.

4.3.4. **WQBEL Calculations**

If 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:

i. If applicable and available, use of the WLA established as part of a TMDL.

ii. Use of a steady-state model to derive MDELs and AMELs.

iii. Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Regional Water Board.

In this Order, no dilution credit is being allowed. However, in accordance with the reopener provision in section 6.3.1.5. in the 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.

The process for developing these limits is in accordance with Section 1.4 of the SIP. Two sets of AMEL and MDEL values are calculated separately, one set for the protection of aquatic life and the other for the protection of human health. The AMEL and MDEL limitations for aquatic life and human health are compared, and the most restrictive AMEL and the most restrictive MDEL are selected as the WQBEL. Using total recoverable nickel as an example, the WQBELs were calculated 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:

$ECA = C + D(C-B)$ when $C > B$, and

$ECA = C$ when $C \leq B$,

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. For discharges from the Facility, criteria for saltwater are independent of hardness and pH.

D = The dilution credit, and

B = The ambient background concentration

As discussed above, for this Order dilution was not allowed; therefore,

ECA = C

For total recoverable nickel the applicable ECAs are:

ECA_{acute} = 75 µg/L

$ECA_{chronic}$ = 8.3 µg/L

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. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers are provided in Section 1.4, Step 3 of the SIP and will not be repeated here.

$LTA_{acute} = ECA_{acute} \times Multiplier_{acute\ 99}$

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. Since for nickel there were 48 samples, and only 19% of the samples were reported as non-detect, the CV is calculated as follows:

CV = Standard Deviation / Average = 15.5 / 6.8 = 2.3

For total recoverable nickel, the following data were used to develop the acute LTA 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):

Number of Samples	CV	ECA $Multiplier_{acute}$	ECA $Multiplier_{chronic}$
48	2.3	0.107	0.180

LTA_{acute} = 75 µg/L x 0.107 = 8.0 µg/L

$LTA_{chronic}$ = 8.3 µg/L x 0.180 = 1.5 µg/L

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

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

For nickel, the most limiting LTA was the $LTA_{chronic}$

$LTA_{nickel} = LTA_{chronic}$ = 1.5 µg/L

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as Maximum Daily Effluent Limit (MDEL) or Average Monthly Effluent Limit (AMEL). 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.

$AMEL_{aquatic\ life} = LTA \times AMEL_{multiplier\ 95}$

$MDEL_{aquatic\ life} = LTA \times MDEL_{multiplier\ 99}$

For nickel the following data were used to develop the AMEL and MDEL for effluent limitations 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):

Number of Samples per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$
4	2.3	9.34	2.97

AMEL = 1.5 µg/L x 2.97 = 4.5 µg/L

MDEL = 1.5 µg/L x 9.34 = 14 µg/L

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

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

For nickel:

$AMEL_{human\ health}$ = 4,600 µg/L

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

$MDEL_{human\ health} = AMEL_{human\ health} \times (Multiplier_{MDEL} / Multiplier_{AMEL})$

For nickel, the following data were used to develop the $MDEL_{human\ health}$:

Number of Samples per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$	Ratio
4	2.3	9.34	2.97	3.15

For nickel:

$MDEL_{human\ health}$= 4,600 µg/L x 3.5 = 16,100 µg/L

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health as the WQBEL for the Order. For nickel the AMEL and MDEL for aquatic life applies.

4.3.4. **WQBELs Based on Basin Plan Water Quality Objectives**

pH. This Order includes instantaneous minimum and maximum effluent limitations for pH based on Basin Plan water quality objectives.

Ammonia. The discharge was evaluated for the potential to exceed the Basin Plan objective for ammonia. The Basin Plan objectives for ammonia are expressed as a function of salinity, pH and temperature. The toxicity of ammonia to aquatic organisms increases with increasing pH and temperature. Therefore, higher pH and temperature values result in lower (more stringent) objectives. The ammonia objectives were calculated using the 10th percentile for salinity, 90th percentile pH and 90th percentile temperature monitoring results obtained from the downstream receiving water Monitoring Location RSW-011. The calculations resulted in effluent limitations for ammonia as N of 1.1 mg/L (MDEL) and 0.49 mg/L (AMEL). Therefore, this Order establishes effluent limitations at Discharge Points 002 and 003. In addition, this Order requires the Discharger to conduct upstream and downstream ammonia monitoring and upstream and downstream pH and temperature monitoring in order to provide data necessary to calculate ammonia objectives and conduct future RPAs.

Bacteria. Order Number R4-2015-0173 established effluent limitations for bacteria including total coliform, fecal coliform and *enterococcus* based on Basin Plan water quality objectives. Monitoring results for total coliform and fecal coliform from 2016 through 2019 were all in compliance with the effluent limitations. Therefore, reasonable potential has not been demonstrated and the effluent limitations for total coliform and fecal coliform are not retained in this Order pursuant to CWA section 402(o)(2)(B)(i) and section 303(d)(4)(B). This Order implements Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays and Estuaries in California (Bacteria Provisions) to address bacteria. The Bacteria Provisions only include objectives for *enterococcus* in marine waters. Monitoring results for *enterococcus* from 2016 through 2019 demonstrated reasonable potential for the Facility to exceed the objectives in the Bacteria Provisions. Therefore, this Order establishes effluent limitations for *enterococcus* based on the objectives included in the Bacteria Provisions.

Dissolved Oxygen. This Order addresses dissolved oxygen through receiving water limitations.

Oil and Grease. This Order addresses oil and grease through technology-based effluent limitations.

Radioactivity. The Basin Plan states that “Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.” Therefore, this Order establishes a narrative effluent limitation for radionuclides based on this Basin Plan objective.

Solid, Suspended or Settleable Materials. Order R4-2015-0173 had a TSS TBEL for storm water. Previous violations of this TBEL and the RPA analysis demonstrated that a WQBEL was necessary. The Basin Plan requires that, "Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses." This narrative objective has been translated into a numeric effluent limitation, based on U.S. EPA's *Quality Criteria for Water* (commonly known as the "Gold Book"). In the Gold Book, U.S. EPA notes that in a study downstream from a discharge where inert suspended solids were increased to 80 mg/L, the density of macroinvertebrates decreased by 60 percent…". This indicates that suspended solids concentrations of 80 mg/L in the receiving water resulted in adverse effects to aquatic life. Therefore, this Order establishes a maximum daily effluent limitation of 75 mg/L for Total Suspended Solids (TSS) for the storm water runoff from this Facility to the Los Cerritos Channel Estuary. This limitation is expected to be protective of receiving water quality, consistent with what is typically established for similar discharges in the Los Angeles Region, and replaces the numerically equivalent TBEL for TSS established in Order R4-2015-0173.

Temperature. The Basin Plan states that temperature objectives for enclosed bays and estuaries are specified in the Thermal Plan. The Thermal Plan contains temperature objectives to assure protection of beneficial uses that apply to the discharge from this Facility to the San Gabriel Estuary. 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 and is included in this Order. Additionally, an effluent limitation that requires that the effluent temperature not exceed the natural temperature of the receiving water by more than 20° F is included consistent with the Thermal Plan.

Total Residual Chlorine. Disinfection of wastewaters with chlorine produces residual chlorine. Chlorine and its reaction products are toxic to aquatic life. The limit for residual chlorine is based on the Basin Plan (page 3-9) narrative, "*Chlorine residual shall not be present in surface water discharges at concentrations that exceed 0.1 mg/L and shall not persist in receiving waters at any concentration that causes impairment of beneficial uses.*" As discussed in Section IV.B of the Fact Sheet, TBELs for total residual chlorine are applicable to the combined discharge at Discharge Points 002 and 003. However, the applicable TBEL is less stringent than the WQBEL of 0.1 mg/L based on the water quality objective contained in the Basin Plan. Therefore, this Order establishes the more stringent total residual chlorine effluent limitation based on Basin Plan objectives.

Turbidity. This Order applies the Basin Plan water quality objective for turbidity as a receiving water limitation.

4.3.5. **Whole Effluent Toxicity (WET)**

Whole effluent toxicity (WET) testing protects receiving waters from the aggregate toxic effect of a mixture of pollutants in the effluent or pollutants that are not typically monitored. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a short or a longer period of time and may measure a sublethal endpoint such as reproduction or growth in addition to mortality. A constituent present at low concentrations may exhibit a chronic effect; however, a higher concentration of the same constituent may be required to produce an acute effect. The Basin Plan includes 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 in 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. In accordance with the Basin Plan, Order No. R4-2015-0173 contained effluent limitations for chronic toxicity based on the facility type, the discharge type, and the potential toxic impacts of the discharge. The Facility discharges large volumes of chlorinated water, such that slight instances of toxicity may potentially result in widespread impacts. Chronic toxicity effluent limitations are also included in this Order to ensure that the receiving water meets the Basin Plan narrative water quality objective for toxicity.

In June 2010, U.S. EPA published a guidance document titled *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010), in which they recommend the following: “Permitting authorities should consider adding the TST approach to their implementation procedures for analyzing valid WET data for their current NPDES WET Program.” The TST approach is another statistical option for analyzing valid WET test data. Use of the TST approach does not result in any changes to U.S. EPA’s WET test methods. Section 9.4.1.2 of U.S. EPA’s *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/0136,1995), recognizes that, “the statistical methods recommended in this manual are not the only possible methods of statistical analysis.” The TST approach can be applied to acute (survival) and chronic (sublethal) endpoints and is appropriate to use for both freshwater and marine U.S. EPA WET test methods.

USEPA’s WET testing program and acute and chronic WET methods rely on the measurement result for a specific test endpoint, not upon achievement of specified concentration-response patterns to determine toxicity. USEPA’s WET methods do not require achievement of specified effluent or ambient concentration-response patterns prior to determining that toxicity is present. See, Supplementary Information in support of the Final Rule establishing WET test methods at 67 Fed. Reg. 69952, 69963, November 19, 2002. Nevertheless, USEPA’s acute and chronic WET methods require that effluent and ambient

concentration-response patterns generated for multi-concentration acute and chronic toxicity tests be reviewed - as a component of test review following statistical analysis - to ensure that the calculated measurement result for the toxicity test is interpreted appropriately. (EPA-821-R-02-012, section 12.2.6.2; EPA-821-R-02-013, section 10.2.6.2.). In 2000, USEPA provided guidance for such reviews to ensure that test endpoints for determining toxicity based on the statistical approaches utilized at the time the guidance was written (NOEC, LC50's, IC25's) were calculated appropriately (EPA 821-B-00-004).

USEPA designed its 2000 guidance as a standardized step-by step review process that investigates the causes for 10 commonly observed concentration-response patterns and provides for the proper interpretation of the test endpoints derived from these patterns for NOECs, LC50s, and IC25s, thereby reducing the number of misclassified test results. The guidance provides one of three determinations based on the review steps: (1) that calculated effect concentrations are reliable and should be reported, (2) that calculated effect concentrations are anomalous and should be explained, or (3) that the test was inconclusive and should be repeated with a newly collected sample. The standardized review of the effluent and receiving water concentration-response patterns provided by USEPA's 2000 guidance decreased discrepancies in data interpretation for NOEC, LC50, and IC25 test results, thereby lowering the chance that a truly nontoxic sample would be misclassified and reported as toxic.

Appropriate interpretation of the measurement result from USEPA's TST statistical approach (pass/fail) for effluent and receiving water samples is, by design, independent from the concentration-response patterns of the toxicity tests for those samples. Therefore, when using the TST statistical approach, application of USEPA's 2000 guidance on effluent and receiving waters concentration-response patterns will not improve the appropriate interpretation of TST results as long as all Test Acceptability Criteria and other test review procedures - including those related to Quality Assurance for effluent and receiving water toxicity tests, reference toxicity tests, and control performance (mean, standard deviation, and coefficient of variation) - described by the WET test methods manual and TST guidance, are followed. The 2000 guidance may be used to identify reliable, anomalous, or inconclusive concentration-response patterns and associated statistical results to the extent that the guidance recommends review of test procedures and laboratory performance already recommended in the WET test methods manual. The guidance does not apply to single-concentration (IWC) and control statistical t-tests and does not apply to the statistical assumptions on which the TST is based. The Regional Water Board will not consider a concentration-response pattern as sufficient basis to determine that a TST t- test result for a toxicity test is anything other than valid, absent other evidence. In a toxicity laboratory, unexpected concentration-response patterns should not occur with any regular frequency and consistent reports of anomalous or inconclusive concentration-response patterns or test results that are not valid will require an investigation of laboratory practices.

Any Data Quality Objectives or Standard Operating Procedure used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent or receiving water toxicity test measurement results from the TST statistical approach which include a consideration of concentration-response patterns and/or PMSDs must be submitted for review by the Regional Water Board, in consultation with USEPA and the State Water Board's Quality Assurance Officer and Environmental Laboratory Accreditation Program (40 CFR section 122.41(h)). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Resources Control Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the PMSD criteria only apply to compliance for NOEC and the sublethal endpoints of the NOEC, and therefore are not used to interpret TST results.

This Order retains the effluent limitations for chronic toxicity established in Order R4-2015-0173. Nevertheless, this Order contains a reopener to allow the Regional Water Board and U.S EPA to modify the permit in the future, if necessary, to make it consistent with any new policy, plan, law, or regulation.

4.4. Final Effluent Limitation Considerations

4.4.1. **Anti-Backsliding Requirements**

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR 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. All effluent limitations in this Order are at least as stringent as the effluent limitations in Order R4-2015-0173 with the exception of those discussed below.

Data from self-monitoring reports were used to conduct a new reasonable potential analysis (RPA) and calculate new effluent limitations using SIP procedures. The calculations resulted in new maximum daily effluent limitations (MDELs) for copper that are less stringent than those included in Order R4-2015-0173. Therefore, the MDELs for copper (dry weather and wet weather) in this Order were revised pursuant to CWA section 402(o)(2)(B)(i).

The dry weather MDEL was revised based on the WLA in the San Gabriel River Metals and Selenium TMDL and new data obtained. The wet weather MDEL was revised based on CTR criteria and new data. CWA section 402(o)(1) prohibits the establishment of less stringent water quality based effluent limitations "except in compliance with section 303(d)(4)." Section 303(d)(4) of the CWA has two parts: paragraph (a) which applies to nonattainment waters and paragraph (b) which applies to attainment waters as follows:

a. For waters where standards are not attained, CWA section 303(d)(4)(A) specifies that any effluent limit based on a TMDL or other WLA may be revised only if the cumulative effect of all such revised effluent limits based on such TMDLs or WLAs will assure the attainment of such water quality standards.

b. For attainment waters, CWA section 303(d)(4)(B) specifies that a limitation based on a water quality standard may be relaxed where the action is consistent with the Antidegradation Policy.

The San Gabriel River Estuary is a nonattainment water as it is included on the 303(d) impaired water bodies list. Copper is one of the pollutants listed as causing impairments. The San Gabriel River Metals and Selenium TMDL includes WLAs for copper in the water column. The new MDELs for copper are less stringent than those included in Order R4-2015-0173. They are calculated based on WLAs included in the TMDL, CTR criteria, and implementing guidance established by the State Water Resources Control Board. The new AMELs for copper, however, are more stringent than those included in Order R4-2015-0173. As a result, over the course of a month the Discharger will be held to a more stringent copper standard. Therefore, the cumulative effect of the new MDELs and AMELs will assure attainment of water quality standards for copper and they comply with the exceptions to CWA sections 402(o) and 303(d)(4)(A).

Order R4-2015-0173 included maximum daily effluent limitations for bacteria including total coliform, fecal coliform and *enterococcus*. Monitoring results for total coliform and fecal coliform from January 2016 through May 2020 were all in compliance with the effluent limitations. Therefore, reasonable potential has not been demonstrated and the effluent limitations for total coliform and fecal coliform are not retained in this Order pursuant to CWA section 402(o)(2)(B)(i) and section 303(d)(4)(B). This Order implements Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays and Estuaries in California (Bacteria Provisions) to address bacteria. The Bacteria Provisions only include objectives for *enterococcus* in marine waters. Effluent limitations for *enterococcus* are therefore established consistent with the requirements included in the Bacteria Provisions.

Order R4-2015-0173 included effluent limitations for sanitary wastewater that was treated on-site prior to discharge to the receiving waters. As discussed in section 2.1.2.2 above, the Discharger constructed a sewer line and decommissioned the on-site treatment plant in September 2018. The discharge of treated sanitary wastewater has ceased and sanitary wastewater is now discharged to the Los Angeles County Sanitation Districts wastewater system. Therefore, effluent limitations for sanitary wastewater are not required in this Order.

Order R4-2015-0173 included effluent limitations that applied to Discharge Point 001. The Facility previously discharged OTC water from Units 1 and 2 to the San Gabriel River Estuary through Discharge Point 001. On December 31, 2019, the Discharger permanently shut down Units 1, 2 and 6 and prevented further discharge from these units by disabling the power supply to the circulation pumps. Therefore, effluent limitations for Discharge Point 001 are not required in this Order.

Order R4-2015-0173 included effluent limitations that applied to Discharge Point O-76. The Facility previously discharged storm water to the Los Cerritos Channel

Estuary through O-76. This discharge point was eliminated during the construction of the CCGT power blocks. Therefore, effluent limitations for Discharge Point O-76 are not required in this Order.

4.4.2. **Antidegradation Policies**

40 CFR 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 final effluent limitations in this Order hold the discharger to performance levels that will not cause or contribute to water quality impairment or degradation. As discussed in Section 4.4.1 above, the removal of the effluent limitations for total coliform and fecal coliform will not allow degradation of the receiving water because the detected concentrations of total coliform and fecal coliform did not demonstrate reasonable potential to cause or contribute to an excursion above water quality objectives. The reduction in the MDELs for copper also will not allow degradation of the receiving water for two reasons. First, the RPA calculations resulted in the establishment of more stringent AMELs than those included in Order R4-2015-0173, and therefore over the course of a month the Discharger will be held to a more stringent copper standard. Second, the 729 MGD permitted flow in this Order is 43 percent less than the 1,271 MGD permitted flow in Order R4-2015-0173, resulting in a significant reduction in the mass of copper discharged to the receiving water.

4.4.3. **Mass-based Effluent Limitations**

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. 40 CFR § 122.45(f)(1) requires that all permit limitations, standards or prohibitions be expressed in terms of mass units except under the following conditions: (1) for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if, in establishing technology-based permit limitation on a case-by-case basis, limitations based on mass are infeasible because the mass or pollutant cannot be related to a measure of production.

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

Mass (lbs/day) = flow rate (MGD) x 8.34 x 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)

According to the Report of Waste Discharge (ROWD) submitted by the Discharger, the maximum flow is 392 MGD at Discharge Point 002 and 337 MGD at Discharge Point 003. The mass-based effluent limitations are calculated using these flows.

4.4.4. **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 free available chlorine and total residual chlorine at Discharge Points 002 and 003. Restrictions on these parameters are discussed in section 4.2.2 of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations 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 water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 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 CFR 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.

4.5. Summary of Final Effluent Limitations

Table F-16. Summary of Effluent Limitations at Discharge Points 002 and 003

Parameter	Units (Note a)	Average Monthly	Maximum Daily	Instantaneous Maximum	Instantaneous Minimum	Basis (Note b)
pH	standard units	---	---	8.5	6.5	BP, PO
Free Available Chlorine (Note c)	mg/L	---	0.2	0.5	---	ELG, PO
Total Residual Chlorine (Note c)	mg/L	---	0.1	---	---	BP, PO
Temperature (Note d)	ºF	---	---	86	---	BP, TP, PO, WP
Enterococci (Note e)	mpn/100 mL	---	---	---	---	Bac
Radioactivity (Note f)	---	---	---	---	---	BP, PO
Chronic Toxicity (Notes g and h)	Pass/Fail, % Effect	Pass	Pass or % Effect <50	---	---	BP, TST
Ammonia, Total (as N)	mg/L	0.49	1.1	---	---	BP
Copper, Total Recoverable, Dry Weather (Note i)	µg/L	2.0	5.7	---	---	TMDL, SIP
Copper, Total Recoverable, Dry Weather (Discharge Point 002) (Note i)	lbs/day	6.5	19	---	---	TMDL, SIP
Copper, Total Recoverable, Dry Weather (Discharge Point 003) (Note i)	lbs/day	5.6	16	---	---	TMDL, SIP
Copper, Total Recoverable, Wet Weather (Note j)	µg/L	---	6.9	---	---	CTR, SIP
Copper, Total Recoverable, Wet Weather (Discharge Point 002) (Note j)	lbs/day	---	22	---	---	CTR, SIP
Copper, Total Recoverable, Wet Weather (Discharge Point 003) (Note j)	lbs/day	---	19	---	---	CTR, SIP
Mercury (Note k)	µg/L	0.012	---	---	---	MP, SIP
Nickel, Total Recoverable	µg/L	4.5	14	---	---	CTR, SIP
Nickel, Total Recoverable (Discharge Point 002)	lbs/day	15	46	---	---	CTR, SIP
Nickel, Total Recoverable (Discharge Point 003)	lbs/day	13	39	---	---	CTR, SIP
Bis(2-Ethylhexyl) Phthalate	µg/L	5.9	18	---	---	CTR, SIP
Bis(2-Ethylhexyl) Phthalate (Discharge Point 002)	lbs/day	19	59	---	---	CTR, SIP

Parameter	Units (Note a)	Average Monthly	Maximum Daily	Instantaneous Maximum	Instantaneous Minimum	Basis (Note b)
Bis(2-Ethylhexyl) Phthalate (Discharge Point 002)	lbs/day	17	51	---	---	CTR, SIP

Footnotes for Table F-16

a. The mass limitations are based on a maximum flow of 392 MGD at Discharge Point 002 and 337 MGD at Discharge Point 002 and are calculated as follows:

Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day

b. Abbreviations:

Bac: Bacteria Provisions BP: Basin Plan
CTR: California Toxics Rule ELG: Effluent Limitation Guidelines
MP: Mercury Provisions PO: Order R4-2015-0173
SIP: State Implementation Policy TMDL: San Gabriel River Metals TMDL
TST: Test of Significant Toxicity WP: White Paper

c. Total residual and free available chlorine may not be discharged from any single generating unit for more than two hours per day unless the Discharger demonstrates to the permitting authority that discharge for more than two hours per day is required for macroinvertebrate control. The MDEL for free available chlorine is applied as a daily average.

d. For temperature, the maximum temperature of the effluent shall not exceed the natural temperature of the receiving waters by more than 20°F.

e. The bacteria water quality objective for all waters where the salinity is greater than 1 part per thousand (ppt) more than 5 percent of the time during the CALENDAR YEAR is: a six-week rolling GEOMETRIC MEAN of *enterococci* not to exceed 30 colony forming units (cfu) per 100 milliliters (mL), or 100 most probable number (mpn) per 100 mL, calculated weekly; and a STATISTICAL THRESHOLD VALUE (STV) of 110 cfu/100 mL, or 110 mpn/100 mL, not to be exceeded by more than 10 percent of the samples collected in a CALENDAR MONTH, calculated in a static manner.

f. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life

g. Report “Pass” or “Fail” for Median Monthly Effluent Limitation (MMEL). Report “Pass” or “Fail” and “% Effect” for Maximum Daily Effluent Limitation (MDEL). During a calendar month, exactly three independent toxicity tests are required for routine monitoring when one toxicity test results in “Fail”.

h. The AMEL for chronic toxicity is applied as a Median Monthly Effluent Limitation.

i. Dry weather is assumed for any discharge that occurs when the flow is less than 156 cubic feet per second (101 MGD) as measured at flow gauge F354-R in Coyote Creek operated by the Los Angeles County Department of Public Works.

j. Wet weather is assumed for any discharge that occurs when the flow is equal to or greater than 156 cubic feet per second (101 MGD) as measured at flow gauge F354-R in Coyote Creek operated by the Los Angeles County Department of Public Works.

k. The effluent limitation for mercury is applied as an annual average of the total mercury concentration in a CALENDAR YEAR.

End of Footnotes for Table F-16

Table F-47. Summary of Effluent Limitations for Low Volume Wastes

Pollutant	Units	AMEL	MDEL	Minimum	Maximum	Basis (Note a)
TSS	mg/l	30	100	---	---	ELG
Oil and grease	mg/l	15	20	---	---	ELG
pH	s.u.	---	---	6.0	9.0	ELG

Footnotes for Table F-17

a. Abbreviations:
ELG: Effluent Limitation Guidelines from 40 CFR section 423.12

End of Footnotes for Table F-17

Table F-18. Summary of Effluent Limitations for Storm Water Runoff to the Los Cerritos Channel Estuary

Pollutant	Units	MDEL	Minimum	Maximum	Basis (Note a)
pH	s.u.	---	6.5	8.5	BP
Temperature	ºF	---	---	86	BP, TP, PO, WP
TSS	mg/l	75	---	---	BP, GB, PO
Oil and grease	mg/l	15	---	---	ELG

Footnotes for Table F-18

a. Abbreviations:
BP: Basin Plan
ELG: Effluent Limitation Guidelines
GB: USEPA Gold Book
PO: Order R4-2015-0173
WP: White Paper

End of Footnotes for Table F-18

4.6. Interim Effluent Limitations—Not Applicable

4.7. Land Discharge Specifications—Not Applicable

4.8. Recycling Specifications—Not Applicable

5. RATIONALE FOR RECEIVING WATER LIMITATIONS

The receiving water limitations in the proposed Order are based upon the water quality objectives contained in the Basin Plan and statewide water quality control plans. As such, they are a required part of the proposed Order.

5.1. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. These water quality objectives include the requirement to maintain high-quality waters pursuant to federal regulations (40 CFR section 131.12) and State Water Board Resolution Number 68-16. Numeric and narrative water quality objectives applicable to surface waters within the Los Angeles Region, including the San Gabriel Estuary and Los Cerritos Channel Estuary are also included in the Thermal Plan and Enclosed Bays and Estuaries Plan, including the provisions related to Bacteria, Sediment Quality, Trash Control and Mercury. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water

5.2. Groundwater—Not Applicable

6. RATIONALE FOR PROVISIONS

6.1. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 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 CFR 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 CFR allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 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).

6.2. Special Provisions

6.2.1. **Reopener Provisions**

These provisions are based on 40 CFR part 123 and Order R4-2015-0173; and on the OTC Policy. 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.

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

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.

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

Storm Water Pollution Prevention Plan (SWPPP). The prior permit required the Discharger to develop and implement a SWPPP. This Order requires the Discharger to update 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 Los Cerritos Channel Estuary. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with storm water. SWPPP requirements are included as Attachment G, based on 40 CFR section 122.44(k).

Best Management Practices Plan (BMPP). This Order requires the Discharger to develop and implement a BMPP. The purpose of the BMPP is to establish site-specific procedures that ensure proper operation and maintenance of equipment, to ensure that unauthorized non-storm water discharges (i.e. spills) do not occur at the Facility.

Special Provision 5.3.3.2 requires the Discharger to develop, maintain, and implement a BMPP. The BMPP may be included within the SWPPP as a description of best management practices (BMPs). Appendix G requires a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges. The Special Provision 5.3.3.2 and Appendix G requirements satisfy the TMDL component to address BMP performance.

Spill Contingency Plan (SCP). This Order requires the Discharger to update and continue to 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

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

Climate Change Effects Vulnerability Assessment and Mitigation Plan: If and when an ROWD is submitted for permit renewal, the Permittee shall consider the impacts of climate change as it affects the operation of the treatment facility due to flooding, wildfire, or other climate-related changes. The Permittee shall develop a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) to assess and manage climate change related effects associated with the groundwater treatment facility operation, water quality and beneficial uses.

6.2.5. **Special Provisions for Publicly-Owned Treatment Works (POTWs) —Not Applicable**

6.2.6. **Other Special Provisions**

Once-Through Cooling Water Compliance Schedule. Under Track 1 of the OTC Policy, an existing power plant must reduce the intake flow rate to a level commensurate with closed-cycle wet cooling such that the through-screen intake velocity does not exceed 0.5 foot per second.

Track 2 is available to existing plants that demonstrate that Track 1 is infeasible, and such plants must reduce impingement and entrainment by 90 percent of the reduction required under Track 1 unless the California Independent System Operator, California Energy Commission, or Public Utilities Commission determines there is continued need for the plant, in which event the State Water Board will hold a hearing to consider suspension of the compliance date. In the interim, the OTC Policy requires plants to implement measures to mitigate impingement and entrainment impacts.

The Discharger submitted an implementation plan for compliance with the OTC Policy on April 1, 2011 and revised it on June 17, 2011. Additional implementation information was requested and submitted on March 31, 2013 and November 8, 2013. Per its revised implementation plan, and subsequent information, the Discharger has proposed to bring Units 1, 2, 3, 4, 5, and 6, into compliance using Track 1.

The Track 1 compliance consists in the construction of dry-cooled natural gas fired combined cycle gas turbine (CCGT) power blocks. On December 31, 2019, the Discharger permanently shut down Units 1, 2 and 6 and disabled the power supply to the circulation pumps. The Facility constructed two dry-cooled natural gas fired combined cycle gas turbine (CCGT) power blocks to replace the retired units. These units began commercial operation on February 6, 2020. A battery energy storage system is currently under construction at the Facility. Four simple-cycle gas turbine units are currently licensed with the California Energy Commission but have not yet began construction. The OTC Policy established a final compliance date (Final Compliance Date) of December 31, 2020 to permanently shut down Units 3, 4 and 5.

The joint-agency Statewide Advisory Committee on Cooling Water Intake Structures (SACCWIS) was created to advise the State Water Board on the implementation of the OTC Policy, ensuring the compliance schedule takes into account the reliability of California's electricity supply. On January 23, 2020, the SACCWIS approved a compliance date extensions report and voted in favor of a recommendation to the State Water Board that included an extension of the Final Compliance Date for Alamitos Generating Station for three years until December 31, 2023. The SACCWIS recommendation was based on the megawatt need identified in California Public Utilities Commission (CPUC) Decision (D.)19-11-016. On September 1, 2020, the State Water Board considered the SACCWIS recommendation and adopted an amendment to the OTC Policy that established a Final Compliance Date for the Discharger of December 31, 2023. Therefore, the Discharger shall achieve full compliance with the OTC Policy by permanently shutting down Units 3, 4 and 5 by the Final Compliance Date for the Facility

established in Section 3.E, Table 1 of the OTC Policy, or any later date established in accordance with the Final Compliance Date suspension provisions in Section 2.B(2) of the OTC Policy.

6.2.7. **Compliance Schedules—Not Applicable**

7. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 CFR 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.

7.1. Influent Monitoring

Section 316(b) of the CWA requires the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. Impingement sampling for fish and commercially important macroinvertebrates shall be conducted semi-annually at Intake Units Nos. 3, 4 and 5. These monitoring requirements for flow and temperature are necessary to evaluate compliance with effluent limitations contained in this Order and compliance with the requirements of the Thermal Plan. Periodic monitoring of the biological impacts caused by the operation of the intake structure is required to ensure compliance with the determination that the design, construction, and operation of the intake structure is consistent with the OTC Policy, as amended on September 1, 2020.

7.2. Effluent Monitoring

7.2.1. **Discharge Points 002 and 003 (Monitoring Locations EFF-002 and EFF-003)**

Quarterly or semi-annual monitoring has been established for those pollutants where effluent limitations at Discharge Points 002 and 003 (Monitoring Locations EFF-002 and EFF-003) have been established in the Order (pH, free available chlorine, total residual chlorine, temperature, enterococcus, radioactivity, mercury, ammonia, copper, nickel, and bis(2-ethylhexyl) phthalate). This monitoring is necessary to determine compliance with effluent limitations and to provide data for evaluating reasonable potential for the discharge to cause or contribute to an exceedance of applicable water quality objectives during future permit reissuances.

Monitoring for all other priority pollutants without corresponding effluent limitations shall be conducted once per year during the permit term. 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 contained in the SIP during future permit reissuances.

7.2.2. **Discharge Point North Basin (Monitoring Location INT-001A)**

Monitoring requirements for low volume wastes included in Order R4-2015-0173 have been retained in the MRP (Attachment E). These monitoring requirements are necessary to determine compliance with effluent limitations established in this Order.

7.2.3. **Discharge Points D1 and D3 (Monitoring Locations O-48 and O-84)**

Monitoring requirements for storm water runoff to the Los Cerritos Channel Estuary included in Order R4-2015-0173 have been retained in the MRP (Attachment E). These monitoring requirements are necessary to determine compliance with effluent limitations established in this Order.

7.3. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) testing protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. This Order requires routine quarterly monitoring for chronic toxicity which is a more stringent measure of the aggregate toxic properties of the discharge than acute toxicity. For this permit, chronic toxicity in the discharge is limited and evaluated using U.S. EPA's 2010 TST statistical approach.

7.4. Receiving Water Monitoring

7.4.1. **Surface Water**

According to the SIP, the Discharger is required to monitor the upstream receiving water for the CTR priority pollutants to determine reasonable potential. Accordingly, the Regional Water Board is requiring that the Discharger conduct upstream receiving water monitoring of the CTR priority pollutants, TCDD equivalents, and ammonia at Monitoring Location RSW-010. Additionally, the Discharger must analyze pH, temperature, and salinity of the upstream receiving water at the same time as the samples are collected for analysis of priority pollutants and ammonia.

This Order includes monitoring requirements for the downstream location, Monitoring Location RSW-011. Monitoring for dissolved oxygen is required to demonstrate compliance with Basin Plan Objectives. In addition, at Monitoring Location RSW-002 the Discharger must monitor for ammonia, pH, and temperature to adjust the ammonia water quality objective, expressed as un-ionized ammonia, to total ammonia and to determine potential impacts of ammonia effluent concentrations to the receiving water concentrations.

7.4.2. **Groundwater—Not Applicable**

7.5. Other Monitoring Requirements—Not Applicable

8. PUBLIC PARTICIPATION

The Regional Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the Facility. As a step in the WDR adoption process, Regional Water

Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

8.1. 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 email and public notice.

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.

8.2. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process electronically at losangeles@waterboards.ca.gov with a copy to thomas.siebels@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 October 21, 2020.

8.3. Public Hearing

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

Date:	November 12, 2020
Time:	9:00 AM
Location:	Remote meeting; no physical location

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.

8.4. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100
Or by email at waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a water quality petition for review, see:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

8.5. 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

8.6. Register of Interested Persons

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

8.7. Additional Information

Requests for additional information or questions regarding this order should be directed to Thomas Siebels at thomas.siebels@waterboards.ca.gov.

ATTACHMENT G – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. 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).

2. 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, over-head 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.

3. PLANNING AND ORGANIZATION

3.1 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 the 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.

3.2 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.

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

PLANNING AND ORGANIZATION
Form Pollution Prevention Team Review other plans

ASSESSMENT PHASE
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

BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE
Non-structural BMPs Structural BMPs Select activity and site-specific BMPs

IMPLEMENTATION PHASE
Train employees Implement BMPs Conduct recordkeeping and reporting

EVALUATION / MONITORING
Conduct annual site evaluation Review monitoring information Evaluate BMPs Review and revise SWPPP

4. 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.

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, skim ponds, 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 6.1.4. 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.

5. LIST OF SIGNIFICANT MATERIALS

The SWPPP shall include a list of significant materials[1] 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, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

[1] "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 (CERCLA); 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.

6. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

The SWPPP shall include a narrative description of the facility's industrial activities, as identified in section 4.5. 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:

A. **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.

B. **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.

C. **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.

D. **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 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.

E. **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 authorized 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 5 above) or equipment.

F. 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.

G. Trash. Describe the facility locations where trash may be generated as a result of facility operations and on-site activities.

The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similarly to Table B. The last column of Table B, "Control Practices", should be completed in accordance with section 8. below.

7. ASSESSMENT OF POTENTIAL POLLUTANT SOURCES

The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in section 6. above to determine:

A. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and

B. 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.

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 8 below.

8. 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 6. and 7. 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 similarly to Table B.

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

8.1 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 8.2. below). Below is a list of non-structural BMPs that should be considered:

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

B. Preventive Maintenance. Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, skim ponds, etc.) as well as other facility equipment and systems.

C. 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.

D. 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.

E. 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.

F. Waste Handling/Recycling. This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

G. 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.

H. 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.

I. 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.

J. Quality Assurance. This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

8.2 Structural BMPs

Where non-structural BMPs as identified in section 8.1. 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:

A. 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.

B. Retention Ponds. This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.

C. Control Devices. This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

D. Secondary Containment Structures. This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

E. Treatment. This includes inlet controls, infiltration devices, skim ponds, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

9. ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The Facility operator shall conduct one comprehensive site compliance evaluation each year. The SWPPP shall be revised, as appropriate, and submitted to the Regional Water Board along with the annual monitoring report. The revisions shall be implemented no later than 90 days after submission. The evaluation is subject to review by the Regional Water Board Executive Officer and modifications may be required. 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 10.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 5.4.5 of Attachment D.

10. 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.

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.