CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

June 8, 2017

Frank Oakes
President
Stellar Biotechnologies, Inc.
322 East Scott Street
Port Hueneme, CA 93041

Certified Mail
Return Receipt Requested
Claim No. 7001 2510 0002 2222 0396

Dear Mr. Oakes:

TRANSMITTAL OF THE WASTE DISCHARGE REQUIREMENTS (WDRs) AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT – STELLAR BIOTECHNOLOGIES, INCORPORATED, STELLAR BIOTECHNOLOGIES FACILITY, PORT HUENEME, CALIFORNIA (NPDES NO. CA0063070, CI NO. 7219)

Our letter dated May 10, 2017, transmitted the revised tentative waste discharge requirements for your permit to discharge wastes under the National Pollutant Discharge Elimination System (NPDES) Program. The revised tentative permit reflected changes addressed in our Response to Comments.

Pursuant to Division 7 of the California Water Code, this Regional Water Board at a public hearing held on June 1, 2017, reviewed the revised tentative requirements, considered all factors in the case, and adopted Order R4-2017-0121. Order R4-2017-0121 serves as an NPDES permit, and it expires on July 31, 2022. Section 13376 of the California Water Code requires that an application/Report of Waste Discharge for a new permit must be filed at least 180 days before the expiration date.

You are required to implement the Monitoring and Reporting Program (MRP) on the effective date (August 1, 2017) of Order R4-2017-0121. Your first quarterly monitoring report for the period of August 1, 2017 through September 30, 2017 is due by November 1, 2017.

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

Please convert all of the regulatory documents, submissions and correspondence that you would normally submit to us as hard copies to a searchable Portable Document Format (PDF). Please reference the facility name, NPDES No. CA0063070 and Compliance File CI-7219 on the documents. Documents that are less than 10 megabytes (MB) should be emailed to losangeles@waterboards.ca.gov with a copy to Jauren.Chen@waterboards.ca.gov. Documents

that are 10 MB or larger should be transferred to a disk and mailed to the address listed above. If you need additional information regarding electronic submittal of documents please visit the Regional Water Board's website listed above and navigate to Paperless Office.

If you have any questions, please contact Jau Ren Chen at Jauren.Chen@waterboards.ca.gov. or at (213)576-6656.

Sincerely,

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

Enclosures

MAILING LIST (via email only)

Mr. David Smith, Environmental Protection Agency, Region 9, Permits Branch (WTR-5)
Ms. Robyn Stuber, Environmental Protection Agency, Region 9, Permits Branch (WTR-5)
NPDES Wastewater Unit, State Water Resources Control Board, Division of Water Quality
Mr. Kenneth Wong, U.S. Army Corps of Engineers
Mr. Bryant Chesney, NOAA, National Marine Fisheries Service
Mr. Jeff Phillips, Department of Interior, U.S. Fish and Wildlife Service
Mr. William Paznokas, California Department of Fish and Wildlife, Region 5
Ms. Teresa Henry, California Coastal Commission, South Coast Region
Mr. Tim Smith, Los Angeles County, Department of public Works
Mr. Angelo Bellomo, Los Angeles County, Department of Public Health
Mr. Rigoberto Vargas, Ventura County, Department of Public Health
Mr. Gerhardt Hubner, Ventura County Watershed Protection District
Ms. Sarah Sikich, Heal the Bay
Mr. Steven Johnson, Heal the Bay
Ms. Bruce Reznik, Los Angeles Waterkeeper
Ms. Laura West, Natural Resources Defense Council
Ms. Joan Matthews, Natural Resources Defense Council
Mr. Jason Weiner, Ventura Coastkeeper
Mr. Daniel Cooper, Lawyers for Clean Water
Mr. James Ashby, PG Environmental
Ms. Sarah Torres, PG Environmental
Mr. Matthew Strang, Stellar Biotechnologies, Inc.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

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

ORDER R4-2017-0121
NPDES NO. CA0063070

WASTE DISCHARGE REQUIREMENTS FOR STELLAR BIOTECHNOLOGIES, INCORPORATED, STELLAR BIOTECHNOLOGIES, INCORPORATED

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

Table 1. Discharger Information

Discharger	Stellar Biotechnologies, Incorporated
Name of Facility	Stellar Biotechnologies, Incorporated
Facility Address	448 Lighthouse Circle Drive
	Port Hueneme, CA 93041
	Ventura County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Aquaculture wastewater (sea water)	34.1450°	-119.2105°	Port Hueneme Harbor

Table 3. Administrative Information

This Order was adopted on:	June 1, 2017
This Order shall become effective on:	August 1, 2017
This Order shall expire on:	July 31, 2022
The Discharger shall file a Report of Waste Discharge 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 U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	Minor

I, Samuel Unger, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on June 1, 2017.

Samuel Unger

Samuel Unger, P.E., Executive Officer

Adopted: June 1, 2017

CONTENTS

TABLES

ATTACHMENTS

I. FACILITY INFORMATION

Information describing the Stellar Biotechnologies, Incorporated facility (Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

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

A. Legal Authorities. This Order serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (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 a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.

B. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E and G through J are also incorporated into this Order.

C. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections IV.B and IV.C, and V.B are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

D. Notification of Interested Parties. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

E. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED that this Order supersedes Order R4-2012-0054 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.

III. DISCHARGE PROHIBITIONS

A. Wastes discharged shall be limited to a maximum of 0.9 million gallons per day (MGD) of aquaculture wastewater (i.e., seawater) via Discharge Point 001. The discharge of wastes from accidental spills or other sources is prohibited.

B. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, the Port Hueneme Harbor, or other waters of the State, are prohibited.

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

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

E. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board (State Water Board) as required by the federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the federal CWA, and amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

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

G. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.

H. The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

1. Final Effluent Limitations –Discharge Point 001

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

Table 4. Effluent Limitations at Discharge Point 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Conventional Pollutants					
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	20	30	--	--
	lbs/day[1]	150	225	--	--
Oil and Grease	mg/L	10	15	--	--
	lbs/day[1]	75	113	--	--
pH	standard units	--	--	6.5	8.5
Total Suspended Solids (TSS)	mg/L	50	75	--	--
	lbs/day[1]	375	563	--	--
Non-conventional Pollutants					
Ammonia Nitrogen, Total (as N)[6]	mg/L	0.42	1.3	--	--
	lbs/day[1]	3.2	9.8		
Chronic Toxicity[2]	Pass or Fail, % Effect	Pass[3]	Pass or % Effect <50	--	--
Temperature	ºF	--	--	--	86
Total Residual Chlorine[6]	mg/L	--	0.1	--	--
	lbs/day[1]	--	0.75	--	--
Turbidity	NTU	50	75	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Coliform	CFU/100mL or MPN/100mL	[4]			
Fecal Coliform	CFU/100mL or MPN/100mL	[4]			
Enterococcus	CFU/100mL or MPN/100mL	[4]			
Dissolved Oxygen	mg/L	[5]			
Priority Pollutants					
Copper, Total Recoverable[6]	µg/L	2.9	5.8	--	--
	lbs/day[1]	0.022	0.044	--	--
Silver, Total Recoverable[6]	µg/L	1.1	2.2	--	--
	lbs/day[1]	0.0082	0.017	--	--
Cyanide, Total (as CN)[6]	µg/L	0.5	1.0	--	--
	lbs/day[1]	0.0038	0.0075	--	--

1. Mass limitations (lbs/day) are based on a maximum flow of 0.900 MGD and are calculated as follows:
   Mass (lbs/day) = Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor)
   For reporting, the actual mass for a pollutant shall be calculated based on the actual measured flow of the discharge.
2. The median monthly effluent limitation (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 more than 1 day in a calendar month period. During such calendar months, up to three independent toxicity tests are required when one toxicity test results in "Fail".
3. This limitation is applied as an MMEL.
4. Bacteria Limitations
   a. 30-day Geometric Mean Limits (based on a minimum of not less than five samples for any 30-day period)
      i. Total coliform density shall not exceed 1,000 CFU/100 ml.
      ii. Fecal coliform density shall not exceed 200 CFU/100 ml.
      iii. Enterococcus density shall not exceed 35 CFU/100 ml.
   b. Single Sample Maximum
      iv. Total coliform density shall not exceed 10,000 CFU/100 ml
      v. Fecal coliform density shall not exceed 400 CFU/100 ml.
      vi. *Enterococcus* density shall not exceed 104 CFU/100 ml.
      vii. Total coliform density shall not exceed 1,000 CFU/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.
5. Dissolved Oxygen Limitation: A mean annual dissolved oxygen concentration of at least 7 mg/L, with no single determination of less than 5.0 mg/L.
6. Intake water credits are included for ammonia, total residual chlorine, copper, silver, or cyanide as follows:
   a. If the influent water pollutant concentration (measured at the influent to the Harbor) does not exceed the average monthly limitation then the limitations are applied as noted in Table 4.
   b. If the influent water pollutant concentration exceeds the average monthly limitation but does not exceed the maximum daily limitation then compliance with the average monthly limitation will be determined based on intake water credits and compliance with the maximum daily limitation is applied as noted in Table 4.
   c. If the influent water pollutant concentration exceeds the maximum daily limitation then compliance with both the average monthly and the maximum daily limitation will be determined based on intake water credits.

B. Land Discharge Specifications – Not Applicable

C. Recycling Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

The discharge shall not cause the following in the Port Hueneme Harbor:

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.

2. Surface water temperature to rise greater than 5º F above the natural temperature of the receiving waters at any time or place. At no time shall the temperature be raised above 80º F as a result of waste discharged.

3. Water Contact Standards

a. 30-day Geometric Mean Limits

i. Total coliform density shall not exceed 1,000 CFU/100 ml.

ii. Fecal coliform density shall not exceed 200 CFU/100 ml.

iii. *Enterococcus* density shall not exceed 35 CFU/100 ml.

b. Single Sample Maximum

i. Total coliform density shall not exceed 10,000 CFU/100 ml.

ii. Fecal coliform density shall not exceed 400 CFU/100 ml.

iii. *Enterococcus* density shall not exceed 104 CFU/100 ml.

iv. Total coliform density shall not exceed 1,000 CFU/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.

4. The mean annual dissolved oxygen concentration to fall below 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.

5. Exceedance of the total ammonia (as N) concentrations specified in the Regional Water Board Resolution 2004-022, adopted on March 4, 2004, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (including Enclosed Bays, Estuaries, and Wetlands) with the Beneficial Use Designations for Protection of "Aquatic Life"*.

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

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

8. Oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the receiving water or on objects in the water.

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

10. Toxic or other deleterious substances in concentrations or quantities which cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for

human consumption either at levels created in the receiving waters or as a result of biological concentration.

11. Accumulation of bottom deposits or aquatic growths.

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

13. 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.

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

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

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

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

18. Nuisance or adversely affect beneficial uses of the receiving water, including biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

19. Violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or State Water Board. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board will revise or modify this Order in accordance with such standards.

B. Groundwater Limitations – Not Applicable

VI. PROVISIONS

A. Standard Provisions

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

2. The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:

a. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management programs developed to comply with NPDES permits issued by the Regional Water Board to local agencies.

b. Discharge of wastes to any point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.

c. 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.

d. 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.

e. 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.

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

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

   i. Violation of any term or condition contained in this Order;

   ii. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;

   iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

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

i. The Discharger shall notify the Regional Water Board not later than 120 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing or processing facility by more than ten percent. Such notification shall include estimates of proposed production rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge and the appropriate filing fee.

j. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.

k. In the event of any change in name, ownership, or control of these waste disposal facilities, the Discharger shall notify this Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Regional Water Board.

l. The Water Code provides that any person who violates a waste discharge requirement or a provision of the Water Code is subject to civil liability of up to $5,000 per day, $10,000 per day, or $25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil liability of up to $10 per gallon per day or $25 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.

m. Violation of any of the provisions of the NPDES program or of any of the provisions of this Order may subject the violator to any of the penalties described herein, or

any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.

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

o. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.

p. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to the planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

   i. Name and general composition of the chemical,

   ii. Frequency of use,

   iii. Quantities to be used,

   iv. Proposed discharge concentrations, and

   v. U.S. EPA registration number, if applicable.

q. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

r. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitations, or receiving water limitations 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.

s. Prior to making any change in the point of discharge, place of use, or use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Wat. Code § 1211.)

t. 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.

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

a. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the federal CWA, and amendments thereto, the Regional Water Board may revise and modify this Order in accordance with such more stringent standards.

b. This Order may be reopened to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as part of this Order and based on the results of the RPA.

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

d. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments, such as an update of an objective or the adoption of a TMDL for the Port Hueneme Harbor.

e. This Order may be reopened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 C.F.R. sections 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order, and endangerment to human health or the environment resulting from the permitted activity.

f. 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.

g. 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.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

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

3. Best Management Practices and Pollution Prevention

a. **Best Management Practices and Spill Contingency Plans.**

The Discharger shall submit, within 90 days of the effective date of this Order, an updated **Best Management Practices Plan (BMPP)** that will be implemented to reduce the discharge of pollutants to the receiving water. The BMPP shall include site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material and trash from being discharged to waters of the State, including efforts taken to prevent contamination of storm water runoff at the

site. Further, the Discharger shall ensure that the discharges from the Facility would neither cause nor contribute to a nuisance in the receiving water, and that unauthorized discharges (i.e. spills) to the receiving water have been effectively prohibited. In particular, a risk assessment of each area identified by the Discharger shall be performed to determine the potential for hazardous or toxic waste/material and trash. The BMPP shall be consistent with the general guidance contained in the U.S. EPA Guidance Manual for Developing Best Management Practices (BMPs) (EPA 833-B-93-004).

Additionally, the BMPP must include a list of chemicals, including quantities of each, that are used at the Facility and could potentially affect the waste discharge. The BMPP should also include site specific preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges and/or accidental spills of hazardous materials/waste, and for minimizing the effect of such events within the Facility.

The Discharger must verify in the BMPP that spill response and storm water pollution prevention at the outdoor area of the Facility is conducted by the Port Hueneme - Oxnard Harbor District (Harbor District). If the Facility's role and responsibility changes with respect to spill response and storm water pollution prevention at the outdoor area of the Facility, then the Facility must notify the Regional Water Board within 30 days.

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

4. Construction, Operation and Maintenance Specifications

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

5. Other Special Provisions – Not Applicable

6. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

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

A. Single Constituent Effluent Limitation.

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

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

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

C. Effluent Limitations Expressed as a Median.

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

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

D. Multiple Sample Data.

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

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

E. Average Monthly Effluent Limitation (AMEL).

If the average (or when applicable, the median determined by section D above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation; though the Discharger 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). 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.

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

1. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for that constituent, the Discharger has demonstrated compliance with the AMEL for each day of the month for that parameter;
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. The concentration of a pollutant (an arithmetic mean or a median) in these samples estimated from the “Multiple Sample Data Reduction” section above, will be used for compliance determination.

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

4. If only one sample was obtained for the month or more than a monthly period and the result exceeds the AMEL; then the Discharger is in violation of the AMEL.

F. Maximum Daily Effluent Limitations (MDEL).

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

G. Instantaneous Minimum Effluent Limitation.

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

H. Instantaneous Maximum Effluent Limitation.

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

I. Median Monthly Effluent Limitation (MMEL)

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

J. Chronic Toxicity

The discharge is subject to determination of “Pass” or “Fail” and “Percent Effect” from a single-effluent concentration chronic toxicity test at the discharge IWC using the Test of Significant Toxicity (TST) statistical approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis (Ho) for the TST approach is: Mean discharge IWC response ≤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.

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

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 and analyzed using the TST statistical approach, results in "Fail". During a calendar month, exactly three independent toxicity tests are required when one toxicity test results in "Fail".

K. Mass and Concentration Limitations

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

L. Bacterial Standards and Analyses

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

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

where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 mL or CFU/100 mL) found on each day of sampling. For bacterial analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 ml for total and fecal coliform, at a minimum, and 1 to 1000 per 100 ml for *Enterococcus*). The detection method used for each analysis shall be reported with the results of the analysis.

Detection methods used for coliforms (total and fecal) and *Enterococcus* shall be those presented in Table 1A of part 136 (revised July 1, 2009), 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:

Arithmetic mean = $\mu = \Sigma x / n$ 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.

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

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

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

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

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

The daily discharge may be determined by the analytical results of a composite sample taken over the course of 1 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.

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

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

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

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

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

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

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

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

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

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

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

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

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

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

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

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

Reporting Level (RL)
The RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the 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.

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:

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

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

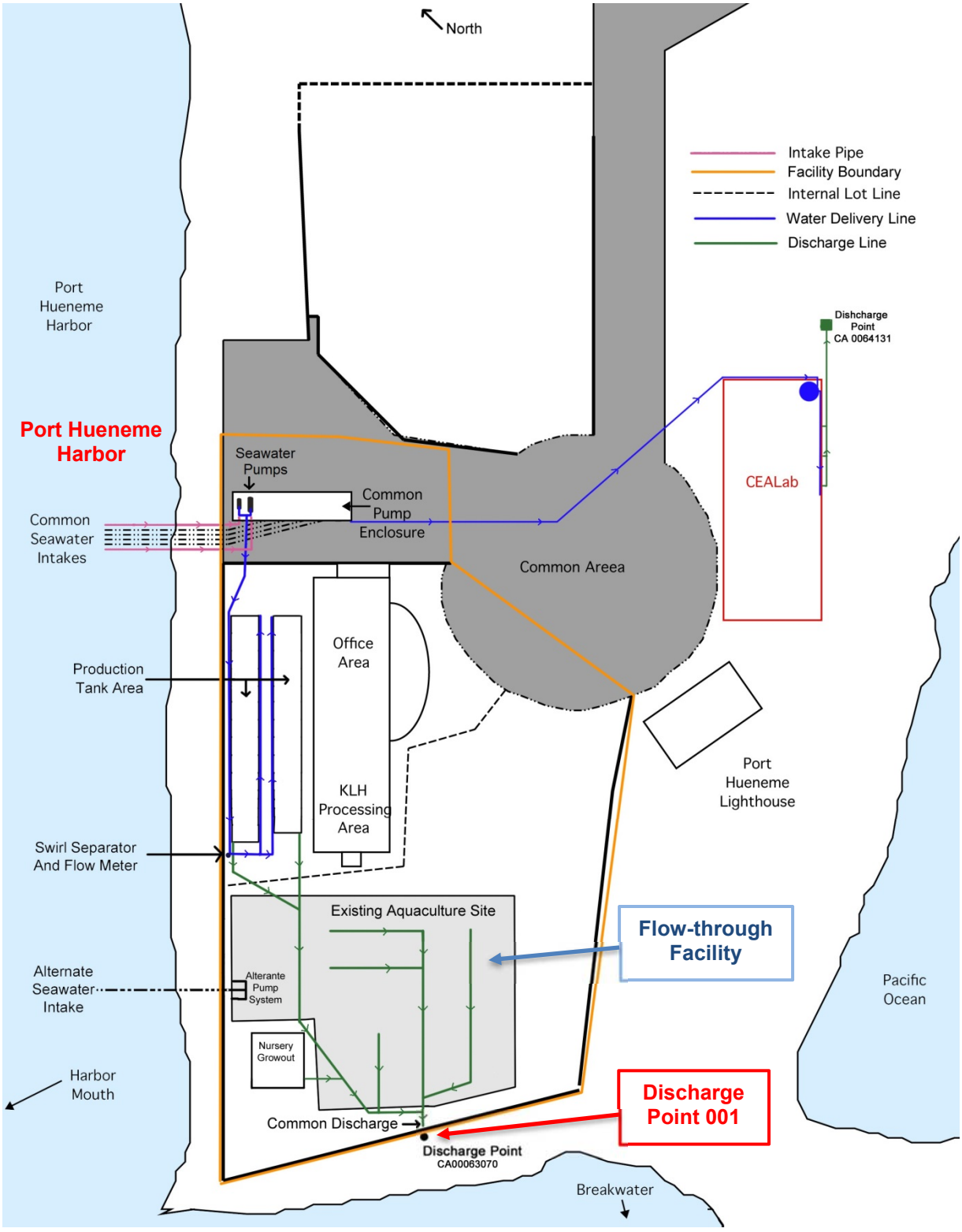
Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first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

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

Water Recycling
The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

ATTACHMENT B – LOCATION MAP

ATTACHMENT C – SITE PLAN AND FLOW DIAGRAM



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

F. Inspection and Entry

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

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

G. Bypass

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

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. As of December 21, 2020 all notices must be submitted electronically by the Discharger to the initial recipient, as defined in Standard Provisions – Reporting V.J. below. Notices shall comply with 40 C.F.R. part 3 (including, in all cases, subpart D of part 3), section 122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by a particular permit or if required to do so by state law. (40 C.F.R. § 122.41(m)(3)(i).)

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). As of December 21, 2020 all notices must be submitted electronically to the initial recipient as defined in Standard Provisions – Reporting V.J. below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22 and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by a particular permit or if required to do so by state law. (40 C.F.R. § 122.41(m)(3)(ii).)

H. Upset

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

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):

a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));

b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and

d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

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

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

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

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

IV. STANDARD PROVISIONS – RECORDS

A. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and

6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

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

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, V.B.5 and V.B.6 below. (40 C.F.R. § 122.41(k).)

2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in

Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d)).

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

C. Monitoring Reports

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

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J and comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. chapter 1, subchapter N, the

results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR reporting form specified by the Regional Water Board or State Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

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

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

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

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

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)

   b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

3. The Regional Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

F. Planned Changes

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

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)

G. 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 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

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

I. Other Information

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

J. Initial Recipient for Electronic Reporting Data

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

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

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

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):

a. 100 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(1)(i));

b. 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 C.F.R. § 122.42(a)(1)(ii));

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

d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels" (40 C.F.R. § 122.42(a)(2)):

a. 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));

b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));

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

d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP NO. 7219)

CONTENTS

TABLES

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP NO. 7219)

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

I. GENERAL MONITORING PROVISIONS

A. An effluent sampling station shall be established for the point of discharge (Discharge Point 001 (Latitude 34.1450° North, Longitude -119.2105°) and shall be located where representative samples of that effluent can be obtained.

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

C. 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.

D. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. sections 136.3, 136.4, and 136.5 (revised May 18, 2012); 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).

E. For any analyses performed for which no procedure is specified in the U.S. EPA guidelines or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.

F. Laboratory Certification. Laboratories analyzing monitoring samples shall be certified by the State Water Board, Drinking Water Division, Environmental Laboratory Accreditation Program (ELAP) in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports. A copy of the laboratory certification shall be provided each time a new certification and/or renewal of the certification is obtained from ELAP.

G. Each monitoring report must affirm in writing that "*all analyses were conducted at a laboratory certified for such analyses by the State Water Board or approved by the Executive Officer and in accordance with current U.S.EPA guideline procedures or as specified in this MRP*."

H. The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), and the Minimum Level (ML) for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported by one of the following methods, as appropriate:

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

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

3. "Not-Detected (ND)" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used.

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

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

I. The MLs employed for effluent analyses to determine compliance with effluent limitations shall be lower than the effluent limitations established in this Order for a given parameter as per the 40 C.F.R. 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.

J. The MLs employed for effluent analyses not associated with determining compliance with effluent limitations in this Order shall be lower than the lowest applicable water quality objective, for a given parameter as per the 40 C.F.R. 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 C.F.R. section 131.38). If the ML value is not below the water quality objective, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test, the associated laboratory QA/QC procedures, reporting levels (RLs), and MDLs.

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

1. When the pollutant under consideration is not included in Attachment G;

2. When the Discharger and Regional Water Board agree to include in the permit a test method that is more sensitive than that specified in 40 C.F.R. part 136 (revised May 18, 2012);

3. When the Discharger agrees to use an ML that is lower than that listed in Attachment G;

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

5. When the Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the U.S. EPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Regional Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

K. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 C.F.R. section 136.3. All QA/QC items must be run on the same dates the samples were actually analyzed, and the results shall be reported in the Regional Water Board format, when it becomes available, and submitted with the laboratory reports. Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the report.

L. Field analyses with short sample holding time such as pH, total residual chlorine, and temperature, may be performed using properly calibrated and maintained portable instruments by trained personnel acting on the Discharger's behalf, using methods in accordance with 40 C.F.R. part 136. All field instruments must be calibrated per

manufacturer's instructions. A manual containing the standard operating procedures for all field analyses, including records of personnel proficiency, training, instruments calibration and maintenance, and quality control procedures shall be maintained onsite, and shall be available for inspection by Regional Water Board staff. Information including instrument calibration, time of sample collection, time of analysis, name of analyst, quality assurance/quality control data, and measurement values shall be clearly documented during each field analysis and submitted to the Regional Water Board as part of the corresponding regular monitoring report.

M. All analyses shall be accompanied by the chain of custody, including but not limited to data and time of sampling, sample identification, and name of person who performed sampling, date of analysis, name of person who performed analysis, QA/QC data, method detection limits, analytical methods, copy of laboratory certification, and a perjury statement executed by the person responsible for the laboratory.

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

O. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Unless otherwise specified in the analytical method, duplicate samples must be analyzed at a frequency of 5% (1 in 20 samples) with at least one if there is fewer than 20 samples in a batch. A batch is defined as a single analytical run encompassing no more than 24 hours from start to finish. A similar frequency shall be maintained for analyzing spiked samples.

P. 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.

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

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

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

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

S. The Discharger shall ensure 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 Resource Control Board
Quality Assurance Program Officer
Office of Information Management and Analysis
1001 I Street, Sacramento, CA 95814

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description[1]
--	INF-001	A location at the intake water supply line where a representative source water (sea water) prior to any influent treatment and introduction to the aquaculture system can be obtained.
001	EFF-001	A location where a representative sample of treated effluent can be obtained from Discharge Point 001 prior to discharge to the Port Hueneme Harbor. Latitude: 34.1450°, Longitude: -119.2105º
--	RSW-001	A location where a representative sample of the receiving water can be obtained outside of the influence of the discharge. Latitude 34.1456 north, Longitude -119.2105

1. The North latitude and West longitude information in Table E-1 are approximate for administrative purposes

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

1. The Discharger shall monitor intake water to the Facility at Monitoring Location INF-001, as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Ammonia Nitrogen, Total (as N)	mg/L	Grab	2/Quarter[1]	[2]
Total Residual Chlorine	mg/L	Grab	2/Quarter[1]	[2]
Copper, Total Recoverable	µg/L	Grab	2/Quarter[1]	[2]
Silver, Total Recoverable	µg/L	Grab	2/Quarter[1]	[2]
Cyanide, Total (as CN)	µg/L	Grab	2/Quarter[1]	[2]

1. Two influent samples shall be collected and should be representative of the intake water for the period sampled. The first influent sample shall be collected 2 hours prior to the effluent sample. The second influent sample shall be collected at approximately the same time as the effluent sample.
2. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136: for priority pollutants, the method must meet the lowest minimum levels (MLs) specified in Appendix 4 of the SIP and included as Attachment G in this Order.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor aquaculture wastewater (i.e. seawater) at Monitoring Location EFF-001 as follows:

Table E-2. Effluent Monitoring at Monitoring Locations EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Daily Flow	gpd or MGD	Meter	1/Day[1]	--
pH	standard units	Grab	1/Week	[3]
Temperature	°F	Grab	1/Week	[3]
Dissolved Oxygen	mg/L	Grab	1/Week	[3]
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L, lbs/day[2]	Grab	1/Quarter	[3]
Oil and Grease	mg/L, lbs/day[2]	Grab	1/Quarter	[3]
Total Suspended Solids (TSS)	mg/L, lbs/day[2]	Grab	1/Quarter	[3]
Turbidity	NTU	Grab	1/Quarter	[3]
Settleable Solids	ml/L	Grab	1/Quarter	[3]
Ammonia Nitrogen, Total (as N)	mg/L, lbs/day[2]	Grab	1/Quarter	[3]
Nitrate Nitrogen, Total (as N)	mg/L	Grab	1/Quarter	[3]
Nitrite Nitrogen, Total (as N)	mg/L	Grab	1/Quarter	[3]
Total Residual Chlorine	mg/L	Grab	1/Quarter	[3]
Total Coliform	MPN/100 ml	Grab	5/Quarter[4]	[3,5]
Fecal Coliform	MPN/ 100 mL	Grab	5/Quarter[4]	[3, 5]
Enterococcus	MPN/ 100 mL	Grab	5/Quarter[4]	[3,5]
Copper, Total Recoverable	µg/L, lbs/day[2]	Grab	1/Quarter	[3]
Silver, Total Recoverable	µg/L, lbs/day[2]	Grab	1/Quarter	[3]
Cyanide, Total (as CN)	µg/L, lbs/day[2]	Grab	1/Quarter	[3]
Chronic Toxicity	Pass or Fail, % Effect	Grab	1/Year[6]	[3,7,]
TCDD Equivalents	pg/L	Grab	1/Permit Term	[3,8]
Remaining Priority Pollutants[9] (excluding asbestos)	µg/L	Grab	1/Year	[3]

1 Flow shall be recorded daily. Days with no flow shall also be recorded.

2 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 x Ce x Q

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

3 Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; for priority pollutants the methods must meet the lowest MLs specified in Attachment 4 of the SIP and included as Attachment G in this Order. Where no methods are specified for a given pollutant, the methods must be approved by this Regional Water Board or the State Water Board.

4 Generally not less than five (5) samples should be taken equally spaced over a 30-day period within the required quarter. The results will provide sufficient data for the calculation of the geometric mean values.

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

6 For the first chronic toxicity sampling event under this Order, the Discharger shall conduct species sensitivity screening in accordance to section V.A.4 of this MRP. During species sensitivity screening, chronic toxicity sampling shall be performed monthly for three consecutive months. Thereafter, sampling shall be performed annually using the most sensitive species.

[7] Refer to section V, Whole Effluent Toxicity Testing Requirements. “Pass” or “Fail” for Median Monthly Effluent Limitation (MMEL). “Pass” or “Fail” and “% Effect” for Maximum Daily Effluent Limitation (MDEL). The MMEL for chronic toxicity shall only apply when there is a discharge more than one day in a calendar month period. During such calendar months, exactly three independent toxicity tests are required when one toxicity test results in “Fail”.

[8] TCDD equivalents shall be calculated using the following formula, where the MLs and the toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the MLs to zero. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners.

Dioxin-TEQ (TCDD equivalents) = Σ(Cx x TEFx)
where: Cx = concentration of dioxin or furan congener x
TEFx= TEF for congener x

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

[9] Priority pollutants as defined by the California Toxics Rule (CTR) defined in the Fact Sheet section III.C.3. of this Order.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Chronic Toxicity

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

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

2. Sample Volume and Holding Time

The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. 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.

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 shall be used to increase sample salinity. In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

a. A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01).

b. A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, and 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).

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

4. Species Sensitivity Screening

Species sensitivity screening shall be conducted monthly for a period of three months during this Order's first required sample collection. During each month, the Discharger shall collect a single effluent sample and concurrently conduct three toxicity tests, using the fish, an invertebrate, and the alga species as previously referenced. The species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine annual monitoring during the permit cycle.

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

5. Quality Assurance and Additional Requirements

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

a. The discharge is subject to determination of "Pass" or "Fail" and "Percent Effect" from a single-effluent concentration chronic toxicity test at the discharge IWC using the Test of Significant Toxicity (TST) approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis (Ho) for the TST approach is: Mean discharge IWC response ≤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.

b. The median monthly effluent limit (MMEL) for chronic toxicity only applies when there is a discharge more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests are required when one toxicity test results in "Fail".

c. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method, then the Discharger must re-sample and re-test within 14 days.

d. Dilution water and control water, including brine controls, shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.

e. 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.

f. The Discharger shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the Monitoring and Reporting Program and the rationale is explained in the Fact Sheet (Attachment F).

6. Preparation of Initial Investigation TRE Work Plan

The Discharger shall prepare or update and submit a generic Initial Investigation TRE Work Plan (1-2 pages) within 90 days of the permit effective date, to be ready to respond to toxicity events. The Discharger shall review and update this work plan as necessary so it remains current and applicable to the discharge. At minimum, the work plan shall include:

a. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

b. A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the Facility.

c. If a Toxicity Identification Evaluation (TIE) is necessary, an indication of who would conduct the TIEs (i.e., an in-house expert or outside contractor).

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

When there is discharge on more than one day in a calendar month, the Median Monthly summary result shall be used to determine if accelerated testing needs to be conducted. When there is discharge on only one day in a calendar month, the Maximum Daily single result shall be used to determine if accelerated testing needs to be conducted.

Within 24 hours of the time the Discharger becomes aware of a failing result, the Discharger shall implement an accelerated monitoring schedule consisting of four, five concentration (including the discharge IWC) toxicity tests, conducted at approximately two week intervals, over an eight week period. If there is no discharge during the eight week period, the Discharger should conduct toxicity testing at the next discharge event following the failing result. If each of the accelerated toxicity tests at the discharge IWC results in "Pass", the Discharger shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests at the discharge IWC results in "Fail", the Discharger shall immediately implement the Toxicity Reduction Evaluation (TRE)

Process conditions set forth below. During accelerated monitoring schedules, only TST results ("Pass" or "Fail", "Percent Effect") for chronic toxicity tests shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL and MMEL.

8. Toxicity Identification Evaluation and Toxicity Reduction Evaluation Process

a. **Toxicity Identification Evaluation (TIE).** A toxicity test sample is immediately subject to TIE procedures to identify the toxic chemical(s), if a chronic toxicity test shows "Fail and % Effect value ≥50". The Discharger shall initiate a TIE using, as guidance, EPA manuals*: Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.

b. **Toxicity Reduction Evaluation (TRE).** When a toxicant or class of toxicants is identified, a TRE shall be performed for that toxicant. The TRE shall include all reasonable steps to identify the source(s) of toxicity and discuss appropriate BMPs to eliminate the causes of toxicity. No later than 30 days after the source of toxicity and appropriate BMPs and/or treatment are identified, the Discharger shall submit a TRE Corrective Action Plan to the Executive Officer for approval. At minimum, the plan shall include:

i. The potential sources of pollutant(s) causing toxicity. Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.

ii. Recommended BMPs and/or treatment to reduce the pollutant(s) causing toxicity.

iii. Follow-up monitoring to demonstrate that toxicity has been removed.

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

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

c. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.

d. The Discharger shall conduct routine effluent monitoring for the duration of the TRE process.

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

9. Ammonia Removal

Except with prior approval from the Executive Officer of the Regional Water Board ammonia shall not be removed from bioassay samples. The Discharger must demonstrate the effluent toxicity is caused by ammonia because of increasing test pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH-sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following may be steps to demonstrate that the toxicity is caused by ammonia and not other toxicants before the Executive Officer would allow for control of pH in the test.

a. There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.

b. Chronic ammonia concentration in the effluent are greater than 4 mg/L total ammonia.

c. Conduct graduated pH tests as specified in the TIE methods. For example, mortality should be higher at pH 8 and lower at pH 6.

d. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite-treated effluent should be lower than the non-zeolite-treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.

When is has been demonstrated that toxicity is due to ammonia because of increasing pH, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent, after submitting a written request to the Regional Water Board, and receiving written permission expressing approval from the Executive Officer of the Regional Water Board.

10. Reporting

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

a. The toxicity test results for the TST statistical approach, reported as “Pass” or “Fail” and “Percent (%) Effect” at the chronic toxicity IWC for the discharge.

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

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

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

e. Any additional QA/QC documentation, upon request from the Regional Water Board.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Surface Water Monitoring (Monitoring Location RSW-001)

1. The Discharger shall monitor the receiving water at Monitoring Location RSW-001 as follows:

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

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Ammonia Nitrogen, Total (as N)[3]	mg/L	Grab	1/Quarter[1]	[2]
pH[3]	standard units	Grab	1/Quarter[1]	[2]
Salinity[3]	ppt	Grab	1/Quarter[1]	[2]
Temperature[3]	°F	Grab	1/Quarter[1]	[2]
Dissolved Oxygen	mg/L	Grab	1/Quarter1	[2]
Total Coliform	MPN/100 ml or CFU/100 ml	Grab	5/Quarter [1,4]	[2,5]
Fecal Coliform	MPN/100 ml or CFU/100 ml	Grab	5/Quarter [1,4]	[2,5]
Enterococcus	MPN/100 ml or CFU/100 ml	Grab	5/Quarter [1,4]	[2,5]
TCDD Equivalents[6]	pg/L	Grab	1/Permit Term	[2]
Priority Pollutants[7] (excluding asbestos)	µg/L	Grab	1/Year	[2]

1. Sample shall be collected when a discharge occurs. Quarterly receiving water monitoring at RSW-001 is only required during each quarterly monitoring period in which discharge occurs. If there is no discharge to surface waters during the quarter, the Discharger shall state so in the corresponding monitoring report under penalty of perjury.
2. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136; for priority pollutants, the methods must meet the lowest MLs specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding ML.
3. Receiving water samples for pH, salinity, temperature and ammonia must be collected at the same time.
4. Generally not less than five (5) samples should be taken equally spaced over a 30-day period within the required quarter. The results will provide sufficient data for the calculation of the geometric mean values.
5. Detection methods used for coliforms (total and fecal) and *Enterococcus* shall be those presented in Table 1A of 40 C.F.R. part 136, unless alternate methods have been approved by U.S. EPA pursuant to 40 C.F.R. part 136 or improved methods have been determined by the Executive Officer and/or U.S. EPA.
6. TCDD equivalents shall be calculated using the following formula, where the MLs and the toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the MLs to zero. U.S. EPA method 1613 may be used to analyze dioxin and furan congeners.

   Dioxin-TEQ (TCDD equivalents) = Σ(Cx x TEFx)
   where: Cx = concentration of dioxin or furan congener x
   TEFx= TEF for congener x

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

Congeners	Minimum Levels (pg/L)	Toxicity Equivalence Factor (TEF)
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

7. Priority Pollutants as defined by the California Toxics Rule (CTR) defined in section III.C.3 of the Fact Sheet to this Order, and included as Attachment H.

IX. OTHER MONITORING REQUIREMENTS

A. Visual Monitoring

1. A visual observation station shall be established in the vicinity of the discharge point to the receiving water, Port Hueneme Harbor.

2. General observations of the receiving water shall be made at each discharge point quarterly when discharges occur. All receiving water observations shall be reported in the semiannual monitoring report. Observations shall be descriptive where applicable, such that colors, approximate amounts, or types of materials are apparent. The following observations shall be made:

a. Tidal stage, time, and date of monitoring

b. Weather conditions

c. Color of water

d. Appearance of oil films or grease, or floatable materials

e. Extent of visual turbidity or color patches

f. Direction of flow

g. Description of odor, if any, of the receiving water

h. Presence and activity of California Least Tern and California Brown Pelican.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

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

3. If the Discharger monitors (other than for process/operational control, startup, research, or equipment testing) any influent, effluent, or receiving water constituent more frequently than required by this Order using approved analytical methods, the results of those analyses shall be included in the monitoring report. These results shall be reflected in the calculation of the average (or median) used in demonstrating compliance with this Order/Permit.

4. 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.

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

6. The Discharger shall report the results of chronic toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting, section V.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website http://www.waterboards.ca.gov/water_issues/programs/ciwqs/. The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit quarterly SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

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

Table E-4. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
1/Day	August 1, 2017	Midnight through 11:59 PM or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submitted with quarterly SMR
1/Week	August 1, 2017	Sunday through Saturday	Submitted with quarterly SMR
1/Quarter	August 1, 2017	January 1 – March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	May 1 August 1 November 1 February 1
2/Quarter	August 1, 2017	January 1 – March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	May 1 August 1 November 1 February 1
5/Quarter	August 1, 2017	January 1 – March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	May 1 August 1 November 1 February 1

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
1/Year	August 1, 2017	January 1 – December 31	Submitted with quarterly SMR
1/Permit Term	August 1, 2017	During the term of this Order	Submitted with quarterly SMR

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

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

   a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

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

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

   d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. **Compliance Determination.** Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.

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

   a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

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

a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the Facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

C. Discharge Monitoring Reports (DMRs)

DMRs are U.S. EPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic 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.

D. Other Reports

1. The Discharger shall report the results of any special studies, chronic toxicity testing, TRE and BMPP required by the Special Provisions – VI.C. The Discharger shall submit reports with the first quarterly SMR scheduled on or immediately following the report due dates in compliance with SMR reporting requirements described in subsection X.B above.

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 BMPP

The BMPP shall be reviewed at a minimum once per year and updated as needed to ensure all actual or potential sources of trash and pollutants discharged from the Facility are addressed. All changes or revisions to the BMPP shall be submitted to the Regional Water Board within 30 days of revisions.

If there is a change in the Discharger's responsibility regarding spill response and storm water runoff, the Discharger shall notify the Regional Water Board within 30 days. The Discharger shall also develop and submit a SCP within 90 days of the notification for the change in spill response responsibility.

ATTACHMENT F – FACT SHEET

CONTENTS

TABLES

ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	4A565022002
Discharger	Stellar Biotechnologies, Incorporated
Name of Facility	Stellar Biotechnologies, Incorporated
Facility Address	448 Lighthouse Circle Drive
	Port Hueneme, CA 93041
	Ventura County
Facility Contact, Title and Phone	Frank Oakes, President and CEO (805) 488-2147
Authorized Person to Sign and Submit Reports	Frank Oakes, President and CEO (805) 488-2147
Mailing Address	332 East Scott Street, Port Hueneme, CA 93041
Billing Address	SAME
Type of Facility	Aquaculture
Major or Minor Facility	Minor
Threat to Water Quality	3
Complexity	C
Pretreatment Program	No
Recycling Requirements	No
Facility Permitted Flow	0.900 million gallons per day (MGD)
Facility Design Flow	0.900 MGD
Watershed	Ventura County Coastal
Receiving Water	Port Hueneme Harbor
Receiving Water Type	Coastal

A. Stellar Biotechnologies, Incorporated (hereinafter Discharger) is the owner and operator of the Stellar Biotechnologies facility (hereinafter Facility) an aquaculture research facility.

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

B. The Facility discharges aquaculture wastewater (i.e. seawater) to the Port Hueneme Harbor, a water of the United States. The Discharger was previously regulated by Order R4-2012-0054 and National Pollutant Discharge Elimination System (NPDES) No. CA0063070 adopted on March 1, 2012 and expired on February 10, 2017. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. The Discharger filed a report of waste discharge and submitted an application for reissuance of its waste discharge requirements (WDRs) and NPDES permit on August 5, 2016. Supplemental information was requested on August 15, 2016 and received on August 25, 2016. The application was deemed complete on September 12, 2016. A site visit was conducted on November 29, 2016, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

D. Regulations at 40 C.F.R. section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. However, pursuant to California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

II. FACILITY DESCRIPTION

The Discharger owns and operates a proprietary aquaculture system for cultivation of *Megathura crenulata,* the giant keyhole limpet, for use in the production of Keyhole Limpet Hemocyanin (KLH), a protein used in the pharmaceutical industry. The flow-through facility is located at 448 Lighthouse Circle Drive, Port Hueneme, California, on land that is currently owned by the Harbor District. At the same location, the Discharger also owns and operates the CEALab that extracts hemocyanin from *M. crenulata* for medical use. The discharges from the CEALab are regulated under a separate permit (NPDES No. CA0064131).

A. Description of Wastewater and Biosolids Treatment and Controls

The Facility uses a conventional flow-through culture system ("EQ-220 Production Sea Water System"). The flow-through system relies on ambient seawater from the Port Hueneme Harbor, adjacent to the facility, which is filtered to remove sand and heavy particulates. The system was designed and built in 2001 to provide optimum growing conditions for *M. crenulata* by maximizing the flow of seawater from their natural habitat into open tanks.

Seawater is pumped from a common in-ocean intake structure consisting of six heavy gauge epoxy-coated steel pipe sleeves anchored above and below water level with concrete abutments and extending 75 feet horizontally to a depth of 10 feet. The intake structure was built in 1996 as part of the Port Hueneme Aquaculture Business Park. The EQ-220 Production Sea Water System installed in the facility is supported by a designated intake pipe; alternate intake pipes are available for future use. Water is supplied at an approximate rate of 150-300 gallons per minute (gpm). Water first passes through a parallel set of basket strainers to trap larger items, like rocks and kelp, which could foul the pump. The water is then pumped to the flowmeter and then into a swirl separator to remove any finer particulates prior to entering the flow-through system.

The flow-through system uses an open baffle structure, consisting of 20 tanks, measuring at 5'x10'x1', holding 400-gallons of water and partitioned to house an average of 100 *M. crenulata*. The system also includes nine, 120 gallon tanks, operated in a similar manner as the previously-described 20 tanks. Those tanks are able to house about 50 adult *M. crenulata*, and are not used for production animals, but usually staging, isolation, or for novel experiments to test possible improvements with the larger production tanks. The flow-through system relies on a constant exchange of seawater to maintain growing conditions.

Water from production tanks flows through PVC pipes to a trench drain that connects to a pipe at Discharge Point 001. The Discharger indicated on EPA Form 2B a maximum daily effluent flow of 0.9 million gallons per day (MGD). Actual flow reported in SMRs from March 2012 through September 2016 varied from 0.187200 MGD to 0.470880 MGD. The Discharger anticipates possible flow increases associated with modification and/or higher production during the forthcoming permit term.

The production tanks are temporarily located to the east of the office building while the construction of a new concrete pad is underway and the trench drain system is updated. Once the construction is complete the tanks will be relocated to the final location southeast of the office building. The attached site map depicts the final location that the facility expects to be using by the summer of 2017.

B. Discharge Points and Receiving Waters

The Facility discharges up to 0.900 MGD of aquaculture wastewater (i.e., seawater), to Port Hueneme Harbor, a water of the United States, via Discharge Point 001. Discharge Point 001 is located at Latitude 34.1450 and Longitude -119.2105.

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

Effluent limitations contained in the existing Order for discharges from Discharge Point 001 and representative monitoring data from the term of the existing Order are summarized in Table F-2 below.

Table F-2. Discharge Point 001 Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitations		Highest Monthly Average	Highest Daily Discharge
		Average Monthly	Maximum Daily		
Flow	MGD	--	0.90	--	0.47088
Fecal Coliform	MPN or CFU/ 100 ml	[1]		16.17[2]	1,600
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	20	30	6.06	6.06
Ammonia Nitrogen, Total (as N)	mg/L	--	--	1.04	1.04
Total Residual Chlorine	mg/L	--	--	0.12	0.12
Dissolved Oxygen	mg/L	[3]		7.82 (Lowest annual average)	6.96 (Lowest daily)
Enterococcus	MPN or CFU/ 100 ml	[1]		33.64[2]	1,330
Oil and Grease	mg/L	10	15	3.39	3.39
pH	standard units	6.5 – 8.5[4]		7.12 – 8.48[5]	
Temperature	F°	86 (Max.)		--	73.76
Turbidity	NTU	50	75	1.86	1.86
Total Coliform	MPN or CFU/ 100 ml	[1]		134.6[2]	>1,600
Total Suspended Solids (TSS)	mg/L	50	75	11.4	11.4

Parameter	Units	Effluent Limitations		Highest Monthly Average	Highest Daily Discharge
		Average Monthly	Maximum Daily		
Copper, Total Recoverable	µg/L	2.9	5.8	8.76[6,7]	8.76[6,7]
Silver, Total Recoverable	µg/L	--	--	6.29[6]	6.29[6]
Cyanide, Total (as CN)	µg/L	--	--	1.16[6]	1.16[6]

1. Bacteria Limitations
   Rolling 30-day Geometric Mean Limits (based on a minimum of not less than five samples for any 30-day period)
   Total coliform density shall not exceed 1,000 CFU/100 ml.
   Fecal coliform density shall not exceed 200 CFU/100 ml.
   Enterococcus density shall not exceed 35 CFU/100 ml.
   Single Sample Maximum
   Total coliform density shall not exceed 10,000 CFU/100 ml.
   Fecal coliform density shall not exceed 400 CFU/100 ml.
   Enterococcus density shall not exceed 104 CFU/100 ml.
   Total coliform density shall not exceed 1,000 CFU/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.
2. Highest geometric mean reported.
3. A mean annual dissolved oxygen concentration of at least 7 mg/L, with no single determination of less than 5.0 mg/L.
4. Instantaneous Minimum – Instantaneous Maximum.
5. Range of observed values.
6. Estimated concentration (DNQ) greater than the method detection limit (MDL) but less than the minimum level (ML).
7. This result is a DNQ which is less than ML. According to the compliance determination protocol in section VII of the previous Order, no violation was asserted.

D. Compliance Summary

Based on data submitted to the Regional Water Board from March 2012 through September 2016, the Discharger has four exceedances (two enterococci, one fecal coliform, and one total coliform) of bacteria limitations. The result of an immediate follow-up sample after each incident complied with bacteria limitations. The Discharger also had two instances of deficient reporting and one instance of deficient monitoring. There were no Regional Water Board enforcement actions for these chronic violations since the occurrence frequency is less than four times in any period of six consecutive months.

E. Planned Changes

In 2017, the Discharger anticipates relocating the holding tanks from their temporary location to a renovated concrete pad.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve

as an NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.

B. California Environmental Quality Act (CEQA)

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

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

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

Table F-3. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Port Hueneme Harbor	Existing: Industrial process supply (PROC), navigation (NAV), commercial and sport fishing (COMM); water contact recreation (REC-1), non-contact water recreation (REC-2); marine habitat (MAR); wildlife habitat (WILD)

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 Board) as Resolution No. 95-84 on November 16, 1995, states that:

> *"It is the policy of the State 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 Port Hueneme Harbor, discharges from the Facility are comprised only of aquaculture wastewater (i.e. seawater). The influent seawater withdrew from the Port Hueneme Harbor is filtered and disinfected prior to its use for the cultivation of Megathura crenulata (a giant keyhold limpet), and there are no addition of chemicals to the seawater throughout the cultivation process prior to the effluent discharge back to the Port Hueneme Harbor. The Facility's effluent treatment units (RCSs) also provide additional filtration and disinfection of the effluent prior to discharge. Nonetheless, this Order contains provisions necessary to protect the beneficial uses of the receiving water when discharges to the Port Hueneme Harbor occur.

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 September 18, 1975. This plan contains temperature objectives for surface waters. Requirements of this Order implement the Thermal Plan. Additionally, a white paper was developed by Regional Water Board staff entitled, *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel; typical aquatic life species present in surface water bodies in the Los Angeles Region. A maximum effluent temperature limitation of 86°F was determined to be appropriate for protection of aquatic life and it is included in this Order.

4. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.

5. **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.

6. **Antidegradation Policy.** Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 (*Statement of Policy with Respect to Maintaining High Quality of Waters in California*). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.

7. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

8. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered

Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

9. **Part 1 Trash Provisions Requirements.** The State Water Board adopted the "*Amendment to the Ocean Plan and Part I Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California*" (Trash Amendments) through Resolution 2015-0019, which was approved by OAL on December 2, 2015 and became effective upon U.S. EPA approval on January 12, 2016. The Trash Amendments apply to all surface waters of the State, with the exception of those waters within the jurisdiction of the Los Angeles Regional Water Board where trash or debris TMDLs are in effect prior to the effective date of the Trash Amendments. The discharge described in this Order is subject to the Trash Provisions as there are currently no Trash TMDLs for Port Hueneme Harbor. The Trash Amendments established a narrative water quality objective for trash and a prohibition on the discharge of trash, implemented through permits issued pursuant to CWA section 402(p), waste discharge requirements, or waivers of waste discharge requirements. No specific implementation provisions were prescribed for individual industrial permittees, and no references were made to the monitoring and reporting requirements for individual industrial permits.

   This Order implements the requirements of the Trash Provisions through the prohibition of trash discharges to the NPDES discharge point. In addition, through requirements to implement BMPs to prevent the discharge of trash, this Order satisfies the conditions of the Trash Provisions.

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

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

The U.S. EPA approved the State's 2012 CWA section 303(d) list of impaired water bodies on June 26, 2015. Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 2012 CWA section 303(d) list and have been scheduled for TMDL.

The Facility discharges into Port Hueneme Harbor. The 2012 State Water Board's California 303(d) List classifies the Port Hueneme Harbor as impaired. The pollutants of concern in the Port Hueneme Harbor include DDT (dichlorodiphenyltrichloroethane) in tissue and PCBs (polychlorinated biphenyls) in tissue. The inclusion of the Port Hueneme Harbor on the 2012 303(d) list documents the waterbody's lack of assimilative capacity for the pollutants of concern. Total Maximum Daily Loads (TMDLs) are developed for pollutants of concern to facilitate the waterbody's recovery of its ability to fully support its beneficial uses. No TMDLs have been developed as these impairments are being addressed by action other than TMDL (dredging and removal of contaminated sediments in the Harbor), and attainments are expected to be achieved in 2019.

E. Other Plans, Policies and Regulations – Not Applicable

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

The Facility is an aquaculture facility that houses marine organisms. The Facility operations generate waste that typically includes unused food and limpet excrement. Solids are commonly present in aquaculture facilities and therefore, total suspended solids (TSS) and turbidity are pollutants of concern. Organics are targeted in wastewater by measuring the 5-day biochemical oxygen demand @ 20°C (BOD). In addition, unused food and limpet excrement may contribute to nitrogen and fecal coliforms in the waste stream, and therefore, ammonia and fecal coliform are pollutants of concern for this type of waste. Also, pH, temperature, and dissolved oxygen are pollutants of concern because the discharge of aquaculture wastewater also has the potential to impact pH, temperature, and dissolved oxygen of the receiving water body. The existing permit includes these pollutants of concern as well as copper and oil and grease. The Facility operations have not changed significantly since the existing permit was issued and the pollutants of concern are retained for this Order. Silver and cyanide were detected in the effluent at elevated levels and are therefore pollutants of concern.

A. Discharge Prohibitions

Discharge Prohibitions are based on the federal Clean Water Act, Basin Plan, Water Code, State Water Board's plans and policies, U.S. EPA guidance and regulations, and previous permit provisions.

B. Technology-Based Effluent Limitations

1. Scope and Authority

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

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

a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS,

fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The 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 publically 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.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

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

2. Applicable Technology-Based Effluent Limitations (TBELs)

The Facility is categorized as an animal aquaculture facility, with the SIC code 0273. 40 C.F.R. part 451 contains effluent limitation guidelines (ELGs) for wastewater discharged from the Concentrated Aquatic Animal Production Point Source Category. However, 40 C.F.R. section 451.1 states that regulations included in 40 C.F.R. Part 451 are only applicable to the discharges of pollutants from facilities that produce 100,000 pounds or more of aquatic animals per year in a flow-through, recirculating, net pen, or submerged cage system. According to Form 2B of the Facility's ROWD, the total yearly harvestable weight produced by the Facility is less than 600 pounds. Therefore, requirements contained in 40 C.F.R. Part 451 are not applicable to the Facility.

The technology-based requirements in this Order are based on case-by-case numeric limitations developed using BPJ in accordance with 40 C.F.R. section 125.3. Technology-based effluent limitations are established in this Order for total suspended solids, oil and grease, turbidity, and biochemical oxygen demand at Discharge Point 001. The limitations for these pollutants are consistent with technology-based effluent limitations (TBEL) included in other orders within the State for similar types of discharges, and are included in this Order to ensure that discharges from the Facility meet the level of treatment attainable by other industrial facilities within the state using existing technologies that are practical, available, and economically achievable. The Regional Water Board considered other relevant factors pursuant to 40 C.F.R. section 125.3, and concluded that the limitations are appropriate.

Table F-4 summarizes the technology-based effluent limitations for Discharge Point 001.

Table F-4. Summary of Technology-based Effluent Limitations for Discharge Point 001

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Biological Oxygen Demand (BOD)	mg/L[1]	20	30
	lbs/day[1]	150	225
Oil and Grease	mg/L[1]	10	15
	lbs/day[1]	75	113
Total Suspended Solids (TSS)	mg/L[1]	50	75
	lbs/day[1]	375	563

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Turbidity	NTU	50	75

1. The mass-emission rates are based on the Facility's maximum flow rate of 0.9 million gallons per day (MGD) at Discharge Point 01, and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

Pursuant to 40 C.F.R section 122.44(k), this Order requires the Discharger to develop, implement, and annually submit a Best Management Practices Plan (BMPP) that establishes site-specific procedures to ensure proper operation and maintenance of the Facility. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with the discharge and prevent the entrainment of trash in the discharge. These procedures shall also ensure that unauthorized discharges do not occur from the Facility. The BMPs shall address all normal facility operations including, but not limited to: cleaning, feeding, transfer and importation of species, removal of dead species, storage and handling of raw material, and disposal of solid waste.

The combination of the BMPP and permit limitations based on past performance and reflecting BPJ will serve as the equivalent of technology-based effluent limitations, in the absence of established ELGs, in order to carry out the purposes and intent of the CWA.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

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

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

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

Priority pollutant water quality criteria in the CTR are applicable to Port Hueneme Harbor. The CTR contains both saltwater and freshwater criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, the following apply, in accordance with section 131.38(c)(3): saltwater criteria apply at salinities of 10 parts per thousand (ppt) and above at locations where this occurs 95 percent or more of the time. Receiving water monitoring data collected by the Discharger demonstrated that 95 percent of the results were greater than 30 ppt. Therefore, CTR criteria for saltwater aquatic life protection and those based on human health for consumption of organisms are used to prescribe the effluent limitations in this Order to protect the beneficial uses of Port Hueneme Harbor, a water of the United States.

Table F-5 summarizes the applicable water quality criteria and objectives for priority pollutants that were reported in detectable concentrations in the effluent or receiving water and for which criteria exist. These criteria were used in conducting the Reasonable Potential Analysis (RPA) for this Order.

Table F-5. Applicable Water Quality Criteria

CTR No.	Constituent[1]	Selected Criteria	CTR/NTR Water Quality Criteria		
			Saltwater		Human Health for Consumption of:
			Acute	Chronic	Organisms Only
		µg/L	µg/L	µg/L	µg/L
1	Antimony	4,300	--	--	4,300
2	Arsenic	36	69	36	--
4	Cadmium	9.4	42	9.4	Narrative
5b	Chromium (VI)	50	1100	50	--
6	Copper	3.7	5.8	3.7	--
8	Mercury	0.051	Reserved	Reserved	0.051
10	Selenium	71	291	71	Narrative
11	Silver	2.2	2.2	NA	--
12	Thallium	6.3	--	--	6.3
13	Zinc	86	95	86	--
14	Cyanide	1.0	1.0	1.0	220,000
20	Bromoform	360	--	--	360
34	Methyl Bromide	4,000	--	--	4,000

1. Metals criteria, with the exception of chromium VI, are expressed as total recoverable.

3. Determining the Need for WQBELs

a. Reasonable Potential Analysis Methodology

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

to an excursion above a state water quality standard, numeric WQBELs are required.

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:

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

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

iii. Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, or other applicable factors indicate that a WQBEL is required.

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

The RPA was performed using effluent and receiving water data collected by the Discharger at Monitoring Location EFF-001 from January 2012 through September 2016. This period represents the term of Order R4-2012-0054.

b. **Reasonable Potential Analysis Results**

Based on the RPA, copper, cyanide and silver demonstrated reasonable potential to cause or contribute to an excursion above the state water quality standard. Refer to Attachment J for a summary of the RPA and associated effluent limitations calculations.

Table F-6. Summary of Reasonable Potential Analysis-Discharge Point 001

CTR No.	Parameter	Applicable WQC (µg/L)	Maximum Effluent Concentration (µg/L)	Maximum Detected Receiving Water Conc. (µg/L)	RPA Result – Need Limitation?	Reason
1	Antimony	4,300	16	28.1	No	MEC<C, B≤C
2	Arsenic	36	1.96	1.68	No	MEC<C, B≤C
4	Cadmium	9.4	1.7	2.3	No	MEC<C, B≤C
5b	Chromium (VI)	50	7.0	7.19	No	MEC<C, B≤C
6	Copper	3.73	8.76[1]	<0.87	Yes	MEC ≥C
8	Mercury	0.051	0.00015	0.00013	No	MEC<C, B≤C
10	Selenium	71	26.1	33	No	MEC<C, B≤C
11	Silver	2.2	6.29[1]	9.8[1]	Yes	MEC and B>=C
12	Thallium	6.3	4.46	<3.4	No	MEC<C, B≤C
13	Zinc	86	43.6	30	No	MEC<C, B≤C
14	Cyanide	1.0	1.16[1]	1.16	Yes	MEC and B>=C
20	Bromofom	360	0.247	1.6	No	MEC<C, B≤C
34	Methyl Bromide	4,000	0.247	<0.086	No	MEC<C, B≤C

1. The result was detected at a level below the minimum level and is an estimated concentration (DNQ).

4. WQBEL Calculations

a. 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 the WLA established as part of a TMDL.

ii. Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).

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

b. This Order establishes WQBELs for copper, cyanide, and silver are based on monitoring results and the following procedures based on the steady-state model, available in section 1.4 of the SIP.

c. Since many of the streams in the Region have minimal upstream flows, mixing zones and dilution credits are usually not appropriate. Therefore, in this Order, no dilution credit is included. However, in accordance with the reopener provision in section VI.C.1.f, 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.

d. **WQBELs Calculation Example**

Using cyanide as an example, the following demonstrates how WQBELs were established for this Order. The table in Attachment J summarizes the development and calculation of all WQBELs for this Order using the process described below.

Calculation of aquatic life AMEL and MDEL:

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

$ECA = C + D(C-B)$ 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, this Order does not allow dilution; therefore

$ECA = C$

For cyanide the applicable water quality criteria are:

$ECA_{acute} = 1.00$ µg/L

$ECA_{chronic} = 1.00$ µg/L

Step 2: For each ECA based or 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 in place of using values in the tables are provided in section 1.4, Step 3 of the SIP and will not be repeated here.

$LTA_{acute} = ECA_{acute} \times Multiplier_{acute99}$

$LTA_{chronic} = ECA_{chronic} \times Multiplier_{chronic99}$

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

For cyanide, the following data was used to develop the acute and chronic LTA using Table 1 of the SIP.

No. of Samples	CV	ECA $Multiplier_{acute}$	ECA $Multiplier_{chronic}$
4	0.6	0.32	0.53

$LTA_{acute\ (cyanide)} = 1.0\ \mu g/L \times 0.32 = 0.32\ \mu g/L$

$LTA_{chronic\ (cyanide)} = 1.0\ \mu g/L \times 0.53 = 0.53\ \mu g/L$

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

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

For cyanide, the most limiting LTA is $LTA_{acute\ (cyanide)}$.

$LTA_{cyanide} = LTA_{acute\ (cyanide)} = 0.32\ \mu g/L$

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

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

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

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

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

No. of Samples Per Month	CV	$Multiplier_{MDEL99}$	$Multiplier_{AMEL95}$
4	0.6	3.11	1.55

For cyanide

AMEL = 0.32 µg/L x 1.55 = 0.50 µg/L

MDEL= 0.32 µg/L x 3.11 = 1.0 µg/L

Calculation of human health AMEL and MDEL

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 cyanide

$AMEL_{human\ health}$ = 220,000 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. A default CV of 0.6 is used for cyanide.

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

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

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$	Ratio
4	0.6	3.11	1.55	2.01

For cyanide:

$MDEL_{human\ health}$= 220,000 µg/L x 2.01 = 442,200 µg/L

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

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

$AMEL_{aquatic\ life}$	$MDEL_{aquatic\ life}$	$AMEL_{human\ health}$	$MDEL_{human\ health}$
0.50	1.0	220,000	442,200

The lowest (most restrictive) effluent limits are incorporated into this Order. For cyanide, there are aquatic life criteria as well as human health criteria. The effluent limitations based on aquatic life criteria are more stringent for cyanide and are selected as the WQBELs.

Final WQBELs for Cyanide

Parameter	AMEL (µ/L)	MDE (µ/L)
Cyanide	0.50	1.0

For silver and copper, there are no human health criteria or WLAs established; therefore, the effluent limitations based on aquatic life criteria are selected as the WQBELs.

5. Effluent Limitations for Copper, Silver, Cyanide and Based on Intake Water Credits

The Army Corps of Engineers periodically dredges the Port Hueneme Harbor near the Facilities' intake location. The Discharger has indicated that dredging operations coincide with high copper concentrations in the intake and to a lesser extent, the effluent. Periodic and planned dredging operations are expected to continue in this permit term and may potentially cause the Discharger to exceed effluent limitations for silver and cyanide as well as copper. Section 1.4.4. of the SIP provides that, intake water credits for a pollutant may be established in an NPDES permit based on a Discharger's demonstration that certain criteria identified in the SIP are met. These criteria are described below.

"(1) The observed maximum ambient background concentration, as determined in section 1.4.3.1 and the intake water concentration of the pollutant exceeds the most stringent applicable criterion/objective for the pollutant.

(2) The intake water credits provided are consistent with any TMDL applicable to the discharge that has been approved by the Regional Water Board, State Water Board, and U.S. EPA.

(3) The intake water is from the same waterbody as the receiving water body. The discharger may demonstrate this condition by showing that:

(a) The ambient background concentration of the pollutant in the receiving water, excluding any amount of the pollutant in the Facility's discharge, is similar to that of the intake water;

(b) There is a direct hydrological connection between the intake and discharge points;

(c) The water quality characteristics are similar in the intake and receiving waters; and;

(d) The intake water pollutant would have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effect had it not been diverted by the discharger.

The Regional Water Board may also consider other factors when determining whether the intake water is from the same water body as the receiving water body:

(4) The Facility does not alter the intake water pollutant chemically or physically in a matter that adversely affects water quality and beneficial uses; and

(5) The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body".

The Discharger meets the criteria in section 1.4.4 of the SIP follows:

Criteria (1). The Discharger samples intake water for copper from a purge hose located at the influent pump (INF-001). Ambient receiving water monitoring samples for priority pollutants, including copper, silver, and cyanide are collected in the Port Hueneme Harbor near the intake pipes, (RSW-001). The terminus of the intake pipe is 75 feet from shore. Both the INF-001 and RSW-001 locations are representative of intake concentrations for copper, silver, and cyanide; however, only copper was sampled at INF-001 during the term of Order R4-2012-0054. No data are available for silver and cyanide at INF-001 as the Facility was not required to monitor intake for these constituents in Order R4-2012-0054. When both INF-001 and RSW-001 were sampled for copper, at the same time, results were all below detection limits. It

should be noted that RSW-001 is sampled only once per year, whereas INF-001 is sampled once per quarter (2 samples on the same date).

Table F-7 provides a comparison of the combined maximum ambient background data (RSW-001), the intake water concentrations (INF-001), and the applicable criteria. The comparison shows that the intake and/or the ambient background data, which, because of the sample location, is also representative of intake water, exceeds the most stringent CTR criteria for copper, silver, and cyanide. For copper, the MEC did not correspond to dates where copper was detected in intake or receiving water. The treatment system may remove some copper from the intake supply. Nonetheless, historical copper intake concentrations as high has 803 µg/L were documented in the Fact Sheet for Order R4-2012-0054, indicating intake credits may be necessary to meet effluent limitations for similar events. For silver and cyanide, the MECs corresponded to the dates where maximum receiving water concentrations were observed.

Table F-7. Intake Water Credit Evaluation Data

Parameter	Effluent Concentration (µg/L)	Maximum Ambient Background (µg/L)	Intake Water (µg/L)	Maximum Ambient Background/Intake Water (µg/L)	Applicable Criteria (µg/L)
Copper	8.76[2]	<0.87	95.6	95.6[1]	3.7
Silver	6.29[2]	9.8[2]	--	9.8[2, 3]	2.2
Cyanide	1.16[2]	1.16[2]	--	1.16[2, 3]	1.0

1. Includes data from INF-001 and RSW-001.
2. The result was detected at a level below the minimum level and is an estimated concentration.
3. Includes data from RSW-001 only.

Criteria (2). There are no TMDLs for copper, silver, and cyanide in the Port Hueneme Harbor. Furthermore, the receiving water is not listed as impaired for copper, silver, or cyanide, therefore the discharge meets this condition.

Criteria (3). The intake structure location, the ambient monitoring location, and Discharge Point 001 are all at the mouth of the Port Hueneme Harbor, demonstrating a direct hydrological connection. Since the intake and receiving waters are in the same water body, the intake and receiving water characteristics are similar.

Criteria (4). The Facility does not add copper, silver, or cyanide to the discharge and provides mechanical filtration that removes these constituents from the intake water. Despite copper intake concentrations as high as 95.6 µg/L, the Facility was able to reduce copper in the effluent to below detection levels (0.87 µg/L to 10 µg/L) in 20 out of 21 samples collected between March 14, 2012 and July 18, 2016. Additionally, the receiving water silver concentration is similar to the effluent concentration and the receiving water cyanide concentration is the same as the effluent concentration. The effluent concentrations of copper, silver, and cyanide are similar to or less than the intake and ambient receiving water concentrations. Therefore, granting of intake credits will not adversely affect water quality or beneficial uses in the Port Hueneme Harbor.

Criteria (5). Because the quality of the effluent is likely to be similar to or better than the intake water, the timing and location of the discharge will not cause adverse effects on water quality and beneficial uses. The Facility's discharge does not alter

currents or mixing within the Harbor and the intake waters will reach the location of the receiving waters through natural mixing processes, thus satisfying this condition.

Based on the evaluation of the criteria above, the Regional Water Board has determined that intake credits for copper, silver, and cyanide are appropriate. According to Section 1.4.4 of the SIP, the Regional Water Board may establish effluent limitations allowing the Facility to discharge a mass and concentration of the intake water pollutant that is no greater than the mass and concentration found in the Facility's intake water. The Regional Water Board may also determine compliance by simultaneously monitoring the pollutant concentrations in the intake water and in the effluent.

Therefore, if an influent water concentration for copper, silver, or cyanide does not exceed the respective AMELs of 2.9 µg/L, 1.1 µg/L, or 0.50 µg/L then the limitations are applied as noted in Table F-9 Summary of Final Effluent Limitations – Discharge Point 001. If an influent water copper, silver, or cyanide concentration exceeds the respective AMEL but does not exceed the MDEL (5.8 µg/L for copper, 2.2 µg/L for silver, or 1.0 µg/L for cyanide) then compliance with the AMEL will be determined based on intake water credits. In this instance, compliance with the MDEL is applied as noted in Table F-9. If the influent water concentration for copper, silver, or cyanide exceeds a respective MDEL, then compliance with both the AMEL and MDEL will be determined based on intake water credits.

When applying an intake water credit, the effluent limitation is equal to the maximum concentration in the influent (i.e., intake) water. Using copper as an example, the equation is as follows:

Cu Effluent Limitation with Intake Water Credit = Maximum Cu Influent Water Concentration.

Two influent samples shall be collected per quarter to address the variability of the influent water. The first influent sample shall be collected two hours prior to the effluent sample. The second influent sample shall be collected at approximately the same time as the effluent sample. When evaluating compliance with the copper effluent limitations based on intake water credit, compare the copper effluent concentration to the maximum copper influent water concentration, as follows:

If Cu Effluent Concentration > Maximum Cu Influent Water Concentration, then Violation.

If Cu Effluent Concentration ≤ Maximum Cu Influent Water Concentration, then Compliant.

6. Temperature

The temperature limitations included in Order R4-2012-0054 were based on specific water quality objectives for existing coastal water discharges in the Thermal Plan and are retained in this Order.

7. WQBELs Based on Basin Plan Objectives

The Basin Plan Objectives applicable to the Discharger are identified in Table F-8. These objectives were evaluated with respect to effluent monitoring data and Facility operations.

Table F-8. Applicable Basin Plan Numeric Water Quality Objectives

Constituent	Units	Water Quality Objective
pH	standard units	The pH of bays and estuaries shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. The pH of inland surface waters must be between 6.5 and 8.5 at all times. Ambient pH shall not be changed more than 0.2 units from natural conditions.
Ammonia	mg/L	For waters where salinity is equal to or greater than 10 parts per thousand (ppt) more than 95% of the time: 1-hour avg. unionized ammonia concentration (mg/L) 0.233mg/L 4-day avg. unionized ammonia concentration (mg/L) 0.035 mg/L
Bacteria	MPN/ 100 ml	Marine Waters Designated for Water Contact Recreation (REC-1) Geometric Mean Limits i. Total coliform density shall not exceed 1,000/100 ml. ii. Fecal coliform density shall not exceed 200/100 ml. iii. *Enterococcus* density shall not exceed 35/100 ml. Single Sample Limits i. Total coliform density shall not exceed 10,000/100 ml. ii. Fecal coliform density shall not exceed 400/100 ml. iii. *Enterococcus* density shall not exceed 104/100 ml. iv. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.
Dissolved Oxygen	mg/L	The mean annual dissolved oxygen concentration of all waters shall be greater than 7.0 mg/L, and no single determination shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations.
Temperature	°F	Receiving water shall not be altered by more than 5°F above the natural temperature.
Total Residual Chlorine	mg/L	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.
Turbidity	NTU	Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU increases shall not exceed 10%.

a. **pH.** This Order includes instantaneous maximum and minimum effluent limitations for pH based on Basin Plan objectives (6.5 – 8.5).

b. **Ammonia.** The ammonia aquatic life objectives of 0.233 mg un-ionized NH_3/L (1-hour average) and 0.035 mg un-ionized NH_3/L (4-day average) were translated to total ammonia according to Resolution 2004-022 *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (including enclosed bays, estuaries and wetlands) with Beneficial Use Designations for Protection of "Aquatic Life.* Ammonia was identified as a pollutant of concern for the Facility. The Discharger collected receiving water pH, temperature, and salinity data from March 2012 through July 2016. From this data set the 90th percentile pH and temperature, and 10th percentile salinity were used to calculate the 1-hour ammonia objectives. The 50^{th} percentile pH, temperature, and salinity were used to calculate the 4-day average objective. Based on these data, the most stringent translated total ammonia objective was 0.89 mg/L. The ammonia MEC (1.04 mg/L) was above this objective indicating reasonable potential for the discharge to exceed the water quality objective. Hence, this Order includes an effluent limitation for ammonia. The

effluent limitations were calculated according to Basin Plan procedures, which follow the steps described in section IV.C.4 of this Fact Sheet. The ammonia effluent calculations are also provided in Attachment I of this Fact Sheet.

c. **Bacteria.** The Basin Plan objectives for total coliform, fecal coliform, and *Enterococcus* are established as effluent limitations in this Order.

d. **Dissolved Oxygen.** Aquaculture wastewater may contain oxygen demanding substances that can lower dissolved oxygen in the effluent and receiving water. Therefore, this Order retains the effluent limitation for dissolved oxygen that was included in Order R4-2012-0054.

e. **Temperature.** This Order addresses temperature requirements for the receiving waters and references the Thermal Plan. Based on the requirement of the Thermal Plan and a white paper 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*, a maximum effluent temperature limitation of 86°F is included in the Order. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. A survey of several kinds of fish indicated that the 86°F temperature protective of aquatic life.

f. **Total Residual Chlorine.** The effluent exhibited an MEC of 0.12 mg/L, which exceeds the Basin Plan objective of 0.1 mg/L. This Order therefore includes an effluent limitation for chlorine equal to a daily maximum of 0.1 mg/L.

g. **Turbidity.** This Order retains the turbidity AMEL of 50 NTU and the MDEL of 75 NTU from Order R4-2012-0054. These effluent limitations are expected to be protective of the Basin Plan objectives.

8. Application of Intake Water Credits for Ammonia and Total Residual Chlorine

Pursuant to 40 C.F.R. section 122.45 (g) (Pollutants in Intake Water), if the discharger makes a request, the effluent limitations or standards may be adjusted to reflect credit for pollutants in the discharger's intake water, The Discharger indicated that the source water for the Stellar Biotechnologies facility, Port Hueneme Harbor, is an active commercial port with multiple businesses contributing discharges and surface water runoff which may affect the source water quality. The Discharger does not conduct operations that contribute ammonia or chlorine to the effluent. The levels of ammonia and total residual chlorine in the influent are similar to the concentrations detected in the effluent. The intake water is obtained directly from the Port Hueneme Harbor and the discharges enter the same water body. The inclusion of intake water credits will restrict effluent concentrations of ammonia and total residual chlorine to levels at or below the intake water concentrations or the final effluent limitations for these pollutants. Based on these facts, the Discharger has satisfied the conditions of 40 C.F.R. section 122.45(g). As such, this Order implements intake credits for ammonia and total residual chlorine at Discharge Point 001.

9. Whole Effluent Toxicity (WET)

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

chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

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

Order R4-2012-0054 included acute toxicity limitations and monitoring requirements in accordance with the Basin Plan. The acute toxicity objective for discharges dictates that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival. Acute toxicity monitoring results obtained during the term of Order R4-2012-0054 indicated that the Facility had no violations of the acute toxicity limitations. Similarly, all chronic toxicity results were 1 TUc, indicating no chronic toxicity in the discharge.

Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects. This Order replaces the acute toxicity limitation in Order R4-2012-0054 with a chronic toxicity limitation. The chronic toxicity limitation addresses both acute and chronic toxicity in the discharge.

In 2010, U.S.EPA endorsed the peer-reviewed Test of Significant Toxicity (TST) approach in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) as an improved statistical testing tool to evaluate data from U.S.EPA's toxicity test methods. The TST statistical approach more reliably identifies toxicity—in relation to the chronic and acute mean responses of regulatory management concern—than the current no observed effect concentration (NOEC) statistical testing approach. TST results are also more transparent than the point estimate model approach used for acute toxicity that is not designed to address the question of statistical uncertainty around the modeled toxicity test result in relation to the effect level of concern. The TST is the superior approach for addressing statistical uncertainty when used in combination with U.S. EPA's toxicity test methods and is implemented in federal permits issued by U.S. EPA Region 9.

The TST's null hypothesis for chronic toxicity is:

H_0: Mean response (In-stream Waste Concentration (IWC) in % effluent) ≤ 0.75 mean response (Control).

Results obtained from a single-concentration chronic toxicity test are analyzed using the TST statistical approach and an acceptable level of chronic toxicity is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P". Since no dilution credit is allowed for the chronic toxicity testing, the chronic toxicity IWC for Discharge Point 001 is 100 percent effluent.

This Order implements the SIP chronic toxicity requirements, which in section 4 states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. Since a chronic WET test is capable of measuring both sublethal and lethal effects and it is more stringent than the acute WET limit, this Order includes chronic toxicity limitations and chronic toxicity monitoring with interpretation using TST methods. The acute toxicity limitation is discontinued, as a chronic toxicity limitation will

ensure that the receiving water meets the Basin Plan narrative water quality objective for toxicity.

D. Final Effluent Limitation Considerations

Section 402(o) of the CWA and section 122.44(l) require that effluent limitations or conditions in reissued Orders be at least as stringent as those in the existing Order based on the submitted sampling data. With the exception of acute toxicity, effluent limitations are retained from, Order No. R4-2012-0054. Removal of these numeric limitations would constitute backsliding under CWA section 402(o). New WQBELs were included in this Order for silver, cyanide, ammonia, and total residual chlorine based on results of the reasonable potential analyses. This Order also allows the Facility to apply intake credits to demonstrate compliance with copper, silver and cyanide effluent limitations.

1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order. Order No. R4-2012-0054 established effluent limitations for acute toxicity. This Order replaces the acute toxicity limitations with a chronic toxicity limitation. For this discharge, chronic toxicity provides a more sensitive endpoint; therefore, it is no less stringent than the acute toxicity limitation.

2. Antidegradation Policies

40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16. Resolution 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates 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.

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

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD, oil and grease, TSS, and turbidity at Discharge Point 001. Restrictions on these parameters are discussed in section IV.B.2 of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the

applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating the individual WQBELs for priority pollutants are based on the CTR implemented by the SIP, which was approved by U.S. EPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by U.S. EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 C.F.R. section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order were approved by U.S. EPA and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

4. Mass-based Effluent Limitations

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. 40 C.F.R. 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 submitted by the Discharger, the maximum flow is 0.9 MGD. As such, the mass-based effluent limitations applicable to Discharge Point 001 are based on 0.9 MGD.

5. Summary of Final Effluent Limitations

Table F-9. Summary of Final Effluent Limitations at Discharge Point 001

Parameter	Units	Effluent Limitations				Basis[1]
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Conventional Pollutants						
BOD	mg/L	20	30	--	--	E, BPJ
	lbs/day[2]	150	225	--	--	
Oil and Grease	mg/L	10	15	--	--	E, BPJ
	lbs/day[2]	75	113	--	--	
pH	standard units	--	--	6.5	8.5	E, BP
TSS	mg/L	50	75	--	--	E, BPJ
	lbs/day[2]	375	563	--	--	
Non-Conventional Pollutants						

Parameter	Units	Effluent Limitations				Basis[1]
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Bacteria	MPN or CFU/ 100 ml	[3]				E, BP
Ammonia Nitrogen, Total (as N)[7]	mg/L	0.42	1.3	--	--	BP
	lbs/day[2]	3.2	9.8	--	--	
Chronic Toxicity[4]	Pass or Fail, % Effect	Pass[5]	Pass or % Effect <50	--	--	BP
Dissolved Oxygen	mg/L	[6]				E, BP
Temperature	ºF	--	--	--	86	E, TP, WP
Total Residual Chlorine[7]	mg/L	--	0.1	--	--	BP
	lbs/day[2]	--	0.75	--	--	
Turbidity	NTU	50	75	--	--	E, BPJ
Priority Pollutants						
Copper, Total Recoverable[7]	µg/L	2.9	5.8	--	--	E, CTR, SIP
	lbs/day[2]	0.022	0.044	--	--	
Silver, Total Recoverable[7]	µg/L	1.1	2.2	--	--	CTR, SIP
	lbs/day[2]	0.0082	0.017	--	--	
Cyanide, Total Recoverable[7]	µg/L	0.5	1.0	--	--	CTR, SIP
	lbs/day[2]	0.0038	0.0075	--	--	

1 BP = Basin Plan; BPJ = Best Professional Judgment; CTR = California Toxics Rule; E = Existing Order R4-2012-0054; SIP = State Implementation Policy; TP = Thermal Plan; and WP = White Paper.

2 Mass loading limitations are based on a maximum flow of 0.900 MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.
For reporting, the actual mass for a pollutant shall be calculated based on the actual measured flow of the discharge.

3 Bacteria Limitations

Geometric Mean Limits (based on a minimum of not less than five samples for any 30-day period)

Total coliform density shall not exceed 1,000 CFU/100 ml.
Fecal coliform density shall not exceed 200 CFU/100 ml.
Enterococcus density shall not exceed 35 CFU/100 ml.

Single Sample Maximum

Total coliform density shall not exceed 10,000 CFU/100 ml
Fecal coliform density shall not exceed 400 CFU/100 ml.
Enterococcus density shall not exceed 104 CFU/100 ml.
Total coliform density shall not exceed 1,000 CFU/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.

4 The median monthly effluent limitation (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 more than 1 day in a calendar month period. During such calendar months, up to three independent toxicity tests are required when one toxicity test results in a “Fail”.

5 Applied as an MMEL.

6 A mean annual dissolved oxygen concentration of at least 7 mg/L, with no single determination of less than 5.0 mg/L.

7 If the influent water pollutant concentration (measured at INF-001) does not exceed the average monthly limitation then the limitations are applied as noted in the Table. If the influent water pollutant concentration exceeds the average monthly limitation but does not exceed the maximum daily limitation then compliance with the average monthly limitation will be determined based on intake water credits and compliance with the maximum daily limitation is applied as noted in the Table. If the influent water pollutant concentration exceeds the maximum daily limitation then compliance with both the average monthly and the maximum

daily will be determined based on intake water credits. The equation for intake credits is as follows:

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications – Not Applicable

G. Recycling Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

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

A. Surface Water

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

B. Groundwater – Not Applicable

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

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

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

B. Special Provisions

1. Reopener Provisions

These provisions are based on 40 C.F.R. part 123 and the previous Order. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new federal regulations, modification in toxicity requirements, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

a. Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan. This provision is based on section 4 of the SIP, Toxicity Control Provisions, which establishes minimum toxicity control requirements for implementing the narrative

toxicity objective for aquatic life protection established in the basin plans of the State of California.

3. Best Management Practices and Pollution Prevention

a. Best Management Practices Plan (BMPP). This Order requires the Discharger to update and continue to implement BMPP and address the wastewater discharges to Port Hueneme Harbor. The BMPP should include site-specific plans, procedures, and practices to minimize the amount of pollutants entering wastewater discharges from materials being stored and activities being conducted throughout the entire Facility. To ensure the Discharger considers and implements appropriate and effective BMPs, the discharger is required to consider implementing BMPs contained in the U.S. EPA Guidance Manual for Developing Best Management Practices (BMPs) (EPA 833-B-93-004) or equivalent alternatives when developing its BMPP.

b. Order No. R4-2012-054 included a requirement for a Spill Contingency Plan (SCP). Currently, the Oxnard Harbor District oversees spill response and storm water pollution prevention on District property, which includes the Facility location. For this reason, this Order requires the Discharger to incorporate elements of the SCP into their BMPP, and indicate in the BMPP that spill response and storm water pollution prevention at the outdoor area of the Facility is conducted by the Harbor District. If the Discharger's role and responsibility changes with respect to spill response and storm water runoff, then the Facility must notify the Regional Water Board within 30 days of obtaining such knowledge.

4. Construction, Operation, and Maintenance Specifications

This provision is based on the requirements of section 122.41(e).

5. Other Special Provisions – Not Applicable

6. Compliance Schedules – Not Applicable

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

A. Influent Monitoring

1. INF-001

The Discharger must monitor influent in order to collect the data necessary to assess the intake water credits for ammonia, total residual chlorine, copper, cyanide, and silver. This requirement was included in Order No. R4-2012-0054 for copper. As intake water credits are allowed in this Order for ammonia, total residual chlorine, silver and cyanide effluent limitations, monitoring requirements at INF-001 are extended to these parameters.

B. Effluent Monitoring

1. Discharge Point 001 (Monitoring Locations EFF-001)

Monitoring for pollutants expected to be present in the discharge will be required as established in the MRP (Attachment E) and as required in the SIP. To demonstrate

compliance with established effluent limitations, the Order carries over the monitoring requirements from Order No. R4-2012-0054 with the exception of total residual chlorine and acute toxicity (see section VII.C of this Fact Sheet for a discussion of acute toxicity).

The monitoring frequency for total residual chlorine has been increased from yearly to quarterly to be consistent with other constituents with effluent limitations.

The SIP states that the Regional Water Board will require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established. This Order requires the Discharger to conduct annual monitoring for the remaining CTR priority pollutants and TCDD Equivalents. The Regional Water Board will use the additional data to conduct an RPA and determine if additional WQBELs are required. The Regional Water Board may reopen the permit to incorporate additional effluent limitations and requirements, if necessary.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. A chemical at a low concentration can have chronic effects but no acute effects. Chronic toxicity is a more stringent requirement than acute toxicity. Hence, instead of acute toxicity limitations as prescribed in the previous permit, this Order includes chronic toxicity limitations. In addition, monitoring requirements for chronic toxicity are also included in the MRP to determine compliance with the effluent limitations. The chronic toxicity testing results are analyzed using the U.S. EPA's TST statistical approach.

D. Receiving Water Monitoring

1. Surface Water

According to the SIP, the Discharger is required to monitor the upstream receiving water for the CTR priority pollutants and TCDD equivalents, to determine reasonable potential and to assess compliance with receiving water limitations and Basin Plan objectives. Accordingly, the Discharger is required to conduct receiving water monitoring for fecal coliform, pH, ammonia, dissolved oxygen, *Enterococcus,* salinity, temperature, total coliform, TCDD equivalents, and CTR priority pollutants at Monitoring Location RSW-001. Additionally, the Discharger must also perform general observations in the monitoring report. Attention shall be given to the presence or absence of floating or suspended matter, discoloration, aquatic life, visible film, sheen or coating, and fungi, slime or other growths.

The Regional Water Board required in Order R4-2012-0054 that sampling was required at a location between 100 and 300 feet from the point of discharge to the receiving water. This Order requires the Discharger monitor the receiving water for CTR priority pollutants at Monitoring Location RSW-001, latitude 34.1456 north, longitude -119.2105 as it has been determined to be a representative sample location that the facility staff have access to on a consistent basis. The Discharger must analyze temperature, pH, salinity and ammonia of the receiving water at the same time since ammonia concentration depends on temperature, pH and salinity.

2. Groundwater – Not Applicable

E. Other Monitoring Requirements

1. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program

Under the authority of section 308 of the CWA (33 U.S.C. § 1318), U.S. EPA requires all dischargers under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by U.S. EPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

2. Visual Monitoring

The Discharger is required to conduct visual observations quarterly in the vicinity of the discharge points. The visual observations may be used to assess compliance with receiving water limitations.

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

A. Notification of Interested Parties

The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided to all interested persons via a local newspaper and email, relevant documents were also available on the Regional Water Board website.

The public had access to the agenda and any changes in dates and locations through the Regional Water Board's website at:
http://www.waterboards.ca.gov/losangeles

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were required to be submitted either in person or by mail to the Executive Officer at the Regional Water Board at 320 West 4th Street, Suite 200, Los Angeles, CA 90013, or by email to losangeles@waterboards.ca.gov with a copy to JauRen.Chen@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 May 5, 2017.

C. 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: June 1, 2017
Time: 9:00 a.m.
Location: Metropolitan Water District of Southern California, Board Room
700 North Alameda Street
Los Angeles, California

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

D. Reconsideration of Waste Discharge Requirements

Any 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 petition for review, see http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be accessed electronically in the CIWQS database or on the Regional Water Board's website at http://www.waterboards.ca.gov/losangeles. The hard copies 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.

F. 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.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Jau Ren Chen at JauRen.Chen@waterboards.ca.gov. or at (213) 576-6656.

ATTACHMENT G – STATE WATER BOARD MINIMUM LEVELS

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

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

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

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

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachloro-cyclopentadiene	5	5		
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol **	1	1		50
Pyrene		10	0.05	

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

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

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

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

Table 2d – PESTICIDES – PCBs*	GC
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
a-Endosulfan	0.02
alpha-BHC	0.01
Aldrin	0.005
b-Endosulfan	0.01
Beta-BHC	0.005
Chlordane	0.1
Delta-BHC	0.005
Dieldrin	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Gamma-BHC (Lindane)	0.02
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

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

Techniques:

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

ATTACHMENT H – LIST OF PRIORITY POLLUTANTS

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

CTR Number	Parameter	CAS Number	Analytical Methods
47	2,4-Dimethylphenol	115679	[1]
48	2-Methyl-4,6-Dinitrophenol	534521	[1]
49	2,4-Dinitrophenol	51285	[1]
50	2-Nitrophenol	88755	[1]
51	4-Nitrophenol	110027	[1]
52	3-Methyl-4-Chlorophenol	59507	[1]
53	Pentachlorophenol	87865	[1]
54	Phenol	118952	[1]
55	2,4,6-Trichlorophenol	88062	[1]
56	Acenaphthene	83329	[1]
57	Acenaphthylene	208968	[1]
58	Anthracene	120127	[1]
59	Benzidine	92875	[1]
60	Benzo(a)Anthracene	56553	[1]
61	Benzo(a)Pyrene	50328	[1]
62	Benzo(b)Fluoranthene	205992	[1]
63	Benzo(ghi)Perylene	191242	[1]
64	Benzo(k)Fluoranthene	207089	[1]
65	Bis(2-Chloroethoxy)Methane	111911	[1]
66	Bis(2-Chloroethyl)Ether	111444	[1]
67	Bis(2-Chloroisopropyl)Ether	118601	[1]
68	Bis(2-Ethylhexyl)Phthalate	117817	[1]
69	4-Bromophenyl Phenyl Ether	111553	[1]
70	Butylbenzyl Phthalate	85687	[1]
71	2-Chloronaphthalene	91587	[1]
72	4-Chlorophenyl Phenyl Ether	7005723	[1]
73	Chrysene	218019	[1]
74	Dibenzo(a,h)Anthracene	53703	[1]
75	1,2-Dichlorobenzene	95501	[1]
76	1,3-Dichlorobenzene	541731	[1]
77	1,4-Dichlorobenzene	116467	[1]
78	3,3'-Dichlorobenzidine	91941	[1]
79	Diethyl Phthalate	84662	[1]
80	Dimethyl Phthalate	131113	[1]
81	Di-n-Butyl Phthalate	84742	[1]
82	2,4-Dinitrotoluene	121142	[1]
83	2,6-Dinitrotoluene	606202	[1]
84	Di-n-Octyl Phthalate	117840	[1]
85	1,2-Diphenylhydrazine	122667	[1]
86	Fluoranthene	206440	[1]
87	Fluorene	86737	[1]
88	Hexachlorobenzene	118741	[1]
89	Hexachlorobutadiene	87863	[1]
90	Hexachlorocyclopentadiene	77474	[1]
91	Hexachloroethane	67721	[1]
92	Indeno(1,2,3-cd)Pyrene	193395	[1]
93	Isophorone	78591	[1]
94	Naphthalene	91203	[1]
95	Nitrobenzene	98953	[1]
96	N-Nitrosodimethylamine	62759	[1]
97	N-Nitrosodi-n-Propylamine	621647	[1]

CTR Number	Parameter	CAS Number	Analytical Methods
98	N-Nitrosodiphenylamine	86306	[1]
99	Phenanthrene	85018	[1]
110	Pyrene	129000	[1]
111	1,2,4-Trichlorobenzene	120821	[1]
112	Aldrin	309002	[1]
113	alpha-BHC	319846	[1]
114	beta-BHC	319857	[1]
115	gamma-BHC	58899	[1]
116	delta-BHC	319868	[1]
117	Chlordane	57749	[1]
118	4,4'-DDT	50293	[1]
119	4,4'-DDE	72559	[1]
111	4,4'-DDD	72548	[1]
111	Dieldrin	60571	[1]
112	alpha-Endosulfan	959988	[1]
113	beta-Endosulfan	33213659	[1]
114	Endosulfan Sulfate	1131178	[1]
115	Endrin	72208	[1]
116	Endrin Aldehyde	7421934	[1]
117	Heptachlor	76448	[1]
118	Heptachlor Epoxide	1124573	[1]
119	PCB-1116	12674112	[1]
120	PCB-1221	11114282	[1]
121	PCB-1232	11141165	[1]
122	PCB-1242	53469219	[1]
123	PCB-1248	12672296	[1]
124	PCB-1254	11197691	[1]
125	PCB-1260	11196825	[1]
126	Toxaphene	8001352	[1]

[1] Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 (revised May 18, 2012); for priority pollutants, the methods must meet the lowest MLs specified in Attachment 4 of the SIP (Attachment H of this permit package) or, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level.

ATTACHMENT I – SUMMARY OF AMMONIA REASONABLE POTENTIAL ANALYSIS (RPA) AND WQBEL CALCULATIONS

Attachement I
Calculations of Water Quality Objectives and Effluent Limits for Ammonia
Steller Biotechnolgies, Inc (CA0063070), March 2012 to July 2016

	Receiving Water		
	pH	Temp. (Deg. F)	Salinity (ppt)
50 percentile	**8.18**	**62.96**	**30.10**
90th percentile	**8.29**	**71.06**	**31.10**
10th Percentile			**29.92**

Calculations for Total Ammonia Water Quality Objectives Based on Un-ionized Ammonia Objectives

	Un-ionized-NH3 Objective [NH3]:	P (atm)	pH	Temp. (K)	Salinity (ppt)	Molal Iconic Strength (i)	pK_a^S	Total Ammonia Objectives (mg/L NH3)
One-hour Average	0.233	1	8.29	294.85	29.92	0.61	9.32	3.37
4-day Average	0.035	1	8.18	290.35	30.10	0.62	9.32	0.89

Molal iconic strength (i) = $19.9273\ S\ (1000-1.005109\ S)^{-1}$
pKa = 0.116 * i + 9.245
Total Ammonia = $[NH_4^+]+[NH_3] = [NH_3] + [NH_3]*10\ ^\wedge\ (pK_a^S + 0.0324\ (298-T) + 0.0415\ P/T - pH)$

Calculations for Final Effluent Monthly Average (AMEL) and Daily Maximum (MDEL) Limitations for Ammonia Nitrogen

Calculation using n (Sampling Frequency) = 4

	Ammonia Water Quality Objective	ECA=WQO (No dilution allowed)	CV	ECA Multiplier (Table 3-6)	LTA	Multiplier (Table 3-7) n = 4	Conversion Factor (mg /L NH3) to (mg/L NH3-N)	MDEL (mg/L NH3-N)	AMEL (mg/L NH3-N)
One-hour Average	3.365	3.365	**1.958**	**0.119**	0.400	**8.434**	0.824	1.293	
4-day Average	0.894	0.894	**1.958**	**0.208**	0.186	**2.752**	0.824		0.422

MDEL = 0.186 (most limiting LTA) x 8.434 x 0.824 = 1.293
AMEL = 0.186 (most limiting LTA) x 2.752 x 0.824 = 0.422

Input data:	Receiving water pH, temperature, and salinity ("RW Data" tab)
	CV (Coefficient of Variation) and ECA, MDEL and AMEL multipliers ("EFF Data" tab)

ATTACHMENT J – SUMMARY OF RPA AND WQBEL CALCULATIONS

Attachment J
Reasonable Potential Analysis and Effluent Limitations
Steller Biotechnologies Inc, Discharge Point No. 001 (NPDES No. CA0063070)

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C or WLAs	MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?
					Freshwater		Saltwater		Human Health for consumption of:					
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only				
1	Antimony	ug/L		16						4300.00	4300.00	No	No	Y
2	Arsenic	ug/L		1.96			69.00	36.00			36.00	No	No	Y
3	Beryllium	ug/L		No Criteria						Narrative	No Criteria	No Criteria	No Criteria	Y
4	Cadmium	ug/L		1.71			42.25	9.36		Narrative	9.36	No	No	Y
5a	Chromium (III)			No Criteria						Narrative	No Criteria	No Criteria	No Criteria	Y
5b	Chromium (VI)	ug/L		7			1100.00	50.00		Narrative	50.00	No	No	Y
6	Copper	ug/L	0.6	8.76			5.78	3.73			3.73	Yes	Yes	Y
7	Lead	ug/L		0.064			220.82	8.52		Narrative	8.52	No	No	Y
8	Mercury	ug/L		0.00008			Reserved	Reserved		0.05100	0.05100	No	No	Y
9	Nickel	ug/L		1.6			74.75	8.28		4600.00	8.28	No	No	Y
10	Selenium	ug/L		26.1			290.58	71.14		Narrative	71.14	No	No	Y
11	Silver	ug/L	0.6	6.29			2.24				2.24	Yes	Yes	Y
12	Thallium	ug/L		4.46						6.30	6.30	No	No	Y
13	Zinc	ug/L		43.6			95.14	85.62			85.6	No	No	Y
14	Cyanide	ug/L	0.6	1.16			1.00	1.00		220000.0	1.00	Yes	Yes	Y
15	Asbestos	MFL		No Criteria							No Criteria	No Criteria	No Criteria	N
16	2,3,7,8 TCDD	ug/L								1.4E-08	1.40E-08			Y
	TCDD Equivalents	ug/L								1.4E-08	1.40E-08			Y
17	Acrolein	ug/L		2.5						780.0	780	No	No	Y
18	Acrylonitrile	ug/L		0.46						0.66	0.660	No	No	Y
19	Benzene	ug/L		0.04						71	71.0	No	No	Y
20	Bromoform	ug/L		0.855						360	360.0	No	No	Y
21	Carbon Tetrachloride	ug/L		0.025						4.4	4.40	No	No	Y
22	Chlorobenzene	ug/L		0.036						21000	21000	No	No	Y
23	Chlorodibromomethane	ug/L		0.03						34	34.00	No	No	Y
24	Chloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
25	2-Chloroethylvinyl ether	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
26	Chloroform	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
27	Dichlorobromomethane	ug/L		0.026						46	46.00	No	No	Y
28	1,1-Dichloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
29	1,2-Dichloroethane	ug/L		0.036						99	99.00	No	No	Y
30	1,1-Dichloroethylene	ug/L		0.036						3.2	3.200	No	No	Y
31	1,2-Dichloropropane	ug/L		0.037						39	39.00	No	No	Y
32	1,3-Dichloropropylene	ug/L		0.052						1700	1700	No	No	Y
33	Ethylbenzene	ug/L		0.045						29000	29000	No	No	Y
34	Methyl Bromide	ug/L		0.247						4000	4000	No	No	Y
35	Methyl Chloride	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
36	Methylene Chloride	ug/L		0.052						1600	1600.0	No	No	Y
37	1,1,2,2-Tetrachloroethane	ug/L		0.076						11	11.00	No	No	Y
38	Tetrachloroethylene	ug/L		0.056						8.85	8.9	No	No	Y
39	Toluene	ug/L		0.045						200000	200000	No	No	Y
40	1,2-Trans-Dichloroethylene	ug/L		0.17						140000	140000	No	No	Y
41	1,1,1-Trichloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
42	1,1,2-Trichloroethane	ug/L		0.033						42	42.0	No	No	Y
43	Trichloroethylene	ug/L		0.05						81	81.0	No	No	Y
44	Vinyl Chloride	ug/L		0.081						525	525	No	No	Y
45	2-Chlorophenol	ug/L		1						400	400	No	No	Y
46	2,4-Dichlorophenol	ug/L		0.75						790	790	No	No	Y
47	2,4-Dimethylphenol	ug/L		1.1						2300	2300	No	No	Y
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L		0.43						765	765.0	No	No	Y
49	2,4-Dinitrophenol	ug/L		0.22						14000	14000	No	No	Y
50	2-Nitrophenol	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
51	4-Nitrophenol	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
53	Pentachlorophenol	ug/L		0.54			13.00	7.90		8.2	7.90	No	No	Y
54	Phenol	ug/L		0.88						4600000	4600000	No	No	Y
55	2,4,6-Trichlorophenol	ug/L		0.47						6.5	6.5	No	No	Y
56	Acenaphthene	ug/L		0.47						2700	2700	No	No	Y
57	Acenaphthylene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
58	Anthracene	ug/L		0.43						110000	110000	No	No	Y
59	Benzidine	ug/L								0.00054	0.00054			Y
60	Benzo(a)Anthracene	ug/L								0.049	0.049			Y
61	Benzo(a)Pyrene	ug/L								0.049	0.049			Y

		REASONABLE POTENTIAL ANALYSIS (RPA)								HUMAN HEALTH CALCULATIONS		
CTR#	Parameters	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?	Reason	Organisms only		
										AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh
1	Antimony	N		28.1		B<=C, Step 7		No	MEC<C & B<=C			
2	Arsenic	N		1.68		B<=C, Step 7		No	MEC<C & B<=C			
3	Beryllium	Y	0.094		N	No Criteria	No Criteria	Uc	No Criteria			
4	Cadmium	N		2.32		B<=C, Step 7		No	MEC<C & B<=C			
5a	Chromium (III)	Y	0.94		N	No Criteria	No Criteria	Uc	No Criteria			
5b	Chromium (VI)	N		7.19		B<=C, Step 7		No	MEC<C & B<=C			
6	Copper	Y	0.87		N	No detected value of B, Step 7		Yes	MEC>=C		2.01	
7	Lead	Y	0.064		N	No detected value of B, Step 7		No	MEC<C & B is ND			
8	Mercury	Y	0.00008		N	No detected value of B, Step 7		No	MEC<C & B is ND			
9	Nickel	Y	1.6		N	No detected value of B, Step 7		No	MEC<C & B is ND			
10	Selenium	N		33		B<=C, Step 7		No	MEC<C & B<=C			
11	Silver	N		9.8		Limit required, B>C & pollutant dete		Yes	MEC>=C		2.01	
12	Thallium	Y	3.4		N	No detected value of B, Step 7		No	MEC<C & B is ND			
13	Zinc	N		30		B<=C, Step 7		No	MEC<C & B<=C			
14	Cyanide	N		1.16		Limit required, B>C & pollutant dete		Yes	MEC>=C	220000	2.01	441362
15	Asbestos					No Criteria	No Criteria	Uc	No Criteria			
16	2,3,7,8 TCDD	Y	0.000000474		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
	TCDD Equivalents	Y	0.000000474		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
17	Acrolein	Y	2.5		N	No detected value of B, Step 7		No	MEC<C & B is ND			
18	Acrylonitrile	Y	0.46		N	No detected value of B, Step 7		No	MEC<C & B is ND			
19	Benzene	Y	0.04		N	No detected value of B, Step 7		No	MEC<C & B is ND			
20	Bromoform	N		1.6		B<=C, Step 7		No	MEC<C & B<=C			
21	Carbon Tetrachloride	Y	0.025		N	No detected value of B, Step 7		No	MEC<C & B is ND			
22	Chlorobenzene	Y	0.036		N	No detected value of B, Step 7		No	MEC<C & B is ND			
23	Chlorodibromomethane	Y	0.03		N	No detected value of B, Step 7		No	MEC<C & B is ND			
24	Chloroethane	Y	0.14		N	No Criteria	No Criteria	Uc	No Criteria			
25	2-Chloroethylvinyl ether	Y	0.14		N	No Criteria	No Criteria	Uc	No Criteria			
26	Chloroform	Y				No Criteria	No Criteria	Uc	No Criteria			
27	Dichlorobromomethane	Y	0.026		N	No detected value of B, Step 7		No	MEC<C & B is ND			
28	1,1-Dichloroethane	Y	0.05		N	No Criteria	No Criteria	Uc	No Criteria			
29	1,2-Dichloroethane	Y	0.036		N	No detected value of B, Step 7		No	MEC<C & B is ND			
30	1,1-Dichloroethylene	Y	0.036		N	No detected value of B, Step 7		No	MEC<C & B is ND			
31	1,2-Dichloropropane	Y	0.037		N	No detected value of B, Step 7		No	MEC<C & B is ND			
32	1,3-Dichloropropylene	Y	0.052		N	No detected value of B, Step 7		No	MEC<C & B is ND			
33	Ethylbenzene	Y	0.045		N	No detected value of B, Step 7		No	MEC<C & B is ND			
34	Methyl Bromide	Y	0.086		N	No detected value of B, Step 7		No	MEC<C & B is ND			
35	Methyl Chloride	N		0.252		No Criteria	No Criteria	Uc	No Criteria			
36	Methylene Chloride	N		1.2		B<=C, Step 7		No	MEC<C & B<=C			
37	1,1,2,2-Tetrachloroethane	Y	0.076		N	No detected value of B, Step 7		No	MEC<C & B is ND			
38	Tetrachloroethylene	Y	0.056		N	No detected value of B, Step 7		No	MEC<C & B is ND			
39	Toluene	Y	0.045		N	No detected value of B, Step 7		No	MEC<C & B is ND			
40	1,2-Trans-Dichloroethylene	Y	0.17		N	No detected value of B, Step 7		No	MEC<C & B is ND			
41	1,1,1-Trichloroethane	Y	0.053		N	No Criteria	No Criteria	Uc	No Criteria			
42	1,1,2-Trichloroethane	Y	0.033		N	No detected value of B, Step 7		No	MEC<C & B is ND			
43	Trichloroethylene	Y	0.05		N	No detected value of B, Step 7		No	MEC<C & B is ND			
44	Vinyl Chloride	Y	0.081		N	No detected value of B, Step 7		No	MEC<C & B is ND			
45	2-Chlorophenol	Y	1		N	No detected value of B, Step 7		No	MEC<C & B is ND			
46	2,4-Dichlorophenol	Y	0.75		N	No detected value of B, Step 7		No	MEC<C & B is ND			
47	2,4-Dimethylphenol	Y	0.76		N	No detected value of B, Step 7		No	MEC<C & B is ND			
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	Y	0.43		N	No detected value of B, Step 7		No	MEC<C & B is ND			
49	2,4-Dinitrophenol	Y	0.22		N	No detected value of B, Step 7		No	MEC<C & B is ND			
50	2-Nitrophenol	Y	0.7		N	No Criteria	No Criteria	Uc	No Criteria			
51	4-Nitrophenol	Y	0.67		N	No Criteria	No Criteria	Uc	No Criteria			
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	Y	0.86		N	No Criteria	No Criteria	Uc	No Criteria			
53	Pentachlorophenol	Y	0.54		N	No detected value of B, Step 7		No	MEC<C & B is ND			
54	Phenol	Y	0.88		N	No detected value of B, Step 7		No	MEC<C & B is ND			
55	2,4,6-Trichlorophenol	Y	0.47		N	No detected value of B, Step 7		No	MEC<C & B is ND			
56	Acenaphthene	Y	0.47		N	No detected value of B, Step 7		No	MEC<C & B is ND			
57	Acenaphthylene	Y	0.39		N	No Criteria	No Criteria	Uc	No Criteria			
58	Anthracene	Y	0.43		N	No detected value of B, Step 7		No	MEC<C & B is ND			
59	Benzidine	Y	1.8		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
60	Benzo(a)Anthracene	Y	0.34		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
61	Benzo(a)Pyrene	Y	0.23		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			

CTR#	Parameters	AQUATIC LIFE CALCULATIONS Saltwater / Freshwater / Basin Plan ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life	LIMITS Lowest AMEL	Lowest MDEL	Recommendation
1	Antimony												No Limit
2	Arsenic												No Limit
3	Beryllium												No Limit
4	Cadmium												No Limit
5a	Chromium (III)												No Limit
5b	Chromium (VI)												No Limit
6	Copper	0.32	1.86	0.53	1.97	1.86	1.55	2.88	3.11	5.783133	2.9	5.8	
7	Lead												No Limit
8	Mercury												No Limit
9	Nickel												No Limit
10	Selenium												No Limit
11	Silver	0.32	0.72	0.53		0.72	1.55	1.11	3.11	2.235294	1.1	2.2	
12	Thallium												No Limit
13	Zinc												No Limit
14	Cyanide	0.32	0.32	0.53	0.53	0.32	1.55	0.50	3.11	1	0.50	1.0	
15	Asbestos												No Limit
16	2,3,7,8 TCDD												No Limit
	TCDD Equivalents												No Limit
17	Acrolein												No Limit
18	Acrylonitrile												No Limit
19	Benzene												No Limit
20	Bromoform												No Limit
21	Carbon Tetrachloride												No Limit
22	Chlorobenzene												No Limit
23	Chlorodibromomethane												No Limit
24	Chloroethane												No Limit
25	2-Chloroethylvinyl ether												No Limit
26	Chloroform												No Limit
27	Dichlorobromomethane												No Limit
28	1,1-Dichloroethane												No Limit
29	1,2-Dichloroethane												No Limit
30	1,1-Dichloroethylene												No Limit
31	1,2-Dichloropropane												No Limit
32	1,3-Dichloropropylene												No Limit
33	Ethylbenzene												No Limit
34	Methyl Bromide												No Limit
35	Methyl Chloride												No Limit
36	Methylene Chloride												No Limit
37	1,1,2,2-Tetrachloroethane												No Limit
38	Tetrachloroethylene												No Limit
39	Toluene												No Limit
40	1,2-Trans-Dichloroethylene												No Limit
41	1,1,1-Trichloroethane												No Limit
42	1,1,2-Trichloroethane												No Limit
43	Trichloroethylene												No Limit
44	Vinyl Chloride												No Limit
45	2-Chlorophenol												No Limit
46	2,4-Dichlorophenol												No Limit
47	2,4-Dimethylphenol												No Limit
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)												No Limit
49	2,4-Dinitrophenol												No Limit
50	2-Nitrophenol												No Limit
51	4-Nitrophenol												No Limit
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)												No Limit
53	Pentachlorophenol												No Limit
54	Phenol												No Limit
55	2,4,6-Trichlorophenol												No Limit
56	Acenaphthene												No Limit
57	Acenaphthylene												No Limit
58	Anthracene												No Limit
59	Benzidine												No Limit
60	Benzo(a)Anthracene												No Limit
61	Benzo(a)Pyrene												No Limit

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C or WLAs	MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?
					Freshwater		Saltwater		Human Health for consumption of:					
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only				
62	Benzo(b)Fluoranthene	ug/L								0.049	0.0490			Y
63	Benzo(ghi)Perylene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
64	Benzo(k)Fluoranthene	ug/L								0.049	0.0490			Y
65	Bis(2-Chloroethoxy)Methane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
66	Bis(2-Chloroethyl)Ether	ug/L		0.51						1.4	1.400	No	No	Y
67	Bis(2-Chloroisopropyl)Ether	ug/L		0.41						170000	170000	No	No	Y
68	Bis(2-Ethylhexyl)Phthalate	ug/L		0.41						5.9	5.9	No	No	Y
69	4-Bromophenyl Phenyl Ether	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
70	Butylbenzyl Phthalate	ug/L		0.29						5200	5200	No	No	Y
71	2-Chloronaphthalene	ug/L		0.48						4300	4300	No	No	Y
72	4-Chlorophenyl Phenyl Ether	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
73	Chrysene	ug/L								0.049	0.049			Y
74	Dibenzo(a,h)Anthracene	ug/L								0.049	0.0490			Y
75	1,2-Dichlorobenzene	ug/L		0.026						17000	17000	No	No	Y
76	1,3-Dichlorobenzene	ug/L		0.051						2600	2600	No	No	Y
77	1,4-Dichlorobenzene	ug/L		0.05						2600	2600	No	No	Y
78	3,3 Dichlorobenzidine	ug/L								0.077	0.08			Y
79	Diethyl Phthalate	ug/L		0.34						120000	120000	No	No	Y
80	Dimethyl Phthalate	ug/L		0.31						2900000	2900000	No	No	Y
81	Di-n-Butyl Phthalate	ug/L		0.31						12000	12000	No	No	Y
82	2,4-Dinitrotoluene	ug/L		0.49						9.10	9.10	No	No	Y
83	2,6-Dinitrotoluene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
84	Di-n-Octyl Phthalate	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
85	1,2-Diphenylhydrazine	ug/L		0.47						0.54	0.540	No	No	Y
86	Fluoranthene	ug/L		0.44						370	370	No	No	Y
87	Fluorene	ug/L		0.51						14000	14000	No	No	Y
88	Hexachlorobenzene	ug/L								0.00077	0.00077			Y
89	Hexachlorobutadiene	ug/L		0.37						50	50.00	No	No	Y
90	Hexachlorocyclopentadiene	ug/L		0.24						17000	17000	No	No	Y
91	Hexachloroethane	ug/L		0.38						8.9	8.9	No	No	Y
92	Indeno(1,2,3-cd)Pyrene	ug/L								0.049	0.0490			Y
93	Isophorone	ug/L		0.41						600	600.0	No	No	Y
94	Naphthalene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
95	Nitrobenzene	ug/L		0.47						1900	1900	No	No	Y
96	N-Nitrosodimethylamine	ug/L		0.47						8.10	8.10000	No	No	Y
97	N-Nitrosodi-n-Propylamine	ug/L		0.53						1.40	1.400	No	No	Y
98	N-Nitrosodiphenylamine	ug/L		0.5						16	16.0	No	No	Y
99	Phenanthrene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
100	Pyrene	ug/L		0.46						11000	11000	No	No	Y
101	1,2,4-Trichlorobenzene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
102	Aldrin	ug/L					1.30			0.00014	0.00014			Y
103	alpha-BHC	ug/L		0.0013						0.013	0.0130	No	No	Y
104	beta-BHC	ug/L		0.0015						0.046	0.046	No	No	Y
105	gamma-BHC	ug/L		0.0037			0.16			0.063	0.063	No	No	Y
106	delta-BHC	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y
107	Chlordane	ug/L					0.09	0.004		0.00059	0.00059			Y
108	4,4'-DDT	ug/L					0.13	0.001		0.00059	0.00059			Y
109	4,4'-DDE (linked to DDT)	ug/L								0.00059	0.00059			Y
110	4,4'-DDD	ug/L								0.00084	0.00084			Y
111	Dieldrin	ug/L					0.71	0.0019		0.00014	0.00014			Y
112	alpha-Endosulfan	ug/L		0.0021			0.034	0.0087		240	0.0087	No	No	Y
113	beta-Endolsulfan	ug/L		0.0021			0.034	0.0087		240	0.0087	No	No	Y
114	Endosulfan Sulfate	ug/L		0.0012						240	240	No	No	Y
115	Endrin	ug/L		0.0013			0.037	0.0023		0.81	0.0023	No	No	Y
116	Endrin Aldehyde	ug/L		0.0019						0.81	0.81	No	No	Y
117	Heptachlor	ug/L					0.053	0.0036		0.00021	0.00021			Y
118	Heptachlor Epoxide	ug/L					0.053	0.0036		0.00011	0.00011			Y
119-125	PCBs sum (2)	ug/L								0.00017	0.00017			Y
126	Toxaphene	ug/L					0.21	0.0002		0.00075	0.0002			Y

		REASONABLE POTENTIAL ANALYSIS (RPA)								HUMAN HEALTH CALCULATIONS		
CTR#	Parameters	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?	Reason	Organisms only		
										AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh
62	Benzo(b)Fluoranthene	Y	0.37		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
63	Benzo(ghi)Perylene	Y	0.23		N	No Criteria	No Criteria	Uc	No Criteria			
64	Benzo(k)Fluoranthene	Y	0.17		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
65	Bis(2-Chloroethoxy)Methane	Y	0.54		N	No Criteria	No Criteria	Uc	No Criteria			
66	Bis(2-Chloroethyl)Ether	Y	0.51		N	No detected value of B, Step 7		No	MEC<C & B is ND			
67	Bis(2-Chloroisopropyl)Ether	Y	0.41		N	No detected value of B, Step 7		No	MEC<C & B is ND			
68	Bis(2-Ethylhexyl)Phthalate	N		0.493		B<=C, Step 7		No	MEC<C & B<=C			
69	4-Bromophenyl Phenyl Ether	Y	0.22		N	No Criteria	No Criteria	Uc	No Criteria			
70	Butylbenzyl Phthalate	Y	0.29		N	No detected value of B, Step 7		No	MEC<C & B is ND			
71	2-Chloronaphthalene	Y	0.48		N	No detected value of B, Step 7		No	MEC<C & B is ND			
72	4-Chlorophenyl Phenyl Ether	Y	0.48		N	No Criteria	No Criteria	Uc	No Criteria			
73	Chrysene	Y	0.074		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
74	Dibenzo(a,h)Anthracene	Y	0.19		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
75	1,2-Dichlorobenzene	Y	0.026		N	No detected value of B, Step 7		No	MEC<C & B is ND			
76	1,3-Dichlorobenzene	Y	0.051		N	No detected value of B, Step 7		No	MEC<C & B is ND			
77	1,4-Dichlorobenzene	Y	0.05		N	No detected value of B, Step 7		No	MEC<C & B is ND			
78	3,3 Dichlorobenzidine	Y	0.43		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
79	Diethyl Phthalate	Y	0.34		N	No detected value of B, Step 7		No	MEC<C & B is ND			
80	Dimethyl Phthalate	Y	0.31		N	No detected value of B, Step 7		No	MEC<C & B is ND			
81	Di-n-Butyl Phthalate	Y	0.31		N	No detected value of B, Step 7		No	MEC<C & B is ND			
82	2,4-Dinitrotoluene	Y	0.49		N	No detected value of B, Step 7		No	MEC<C & B is ND			
83	2,6-Dinitrotoluene	Y	0.55		N	No Criteria	No Criteria	Uc	No Criteria			
84	Di-n-Octyl Phthalate	Y	0.31		N	No Criteria	No Criteria	Uc	No Criteria			
85	1,2-Diphenylhydrazine	Y	0.47		N	No detected value of B, Step 7		No	MEC<C & B is ND			
86	Fluoranthene	Y	0.44		N	No detected value of B, Step 7		No	MEC<C & B is ND			
87	Fluorene	Y	0.51		N	No detected value of B, Step 7		No	MEC<C & B is ND			
88	Hexachlorobenzene	Y	0.39		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
89	Hexachlorobutadiene	Y	0.37		N	No detected value of B, Step 7		No	MEC<C & B is ND			
90	Hexachlorocyclopentadiene	Y	0.24		N	No detected value of B, Step 7		No	MEC<C & B is ND			
91	Hexachloroethane	Y	0.38		N	No detected value of B, Step 7		No	MEC<C & B is ND			
92	Indeno(1,2,3-cd)Pyrene	Y	0.38		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
93	Isophorone	Y	0.41		N	No detected value of B, Step 7		No	MEC<C & B is ND			
94	Naphthalene	Y	0.44		N	No Criteria	No Criteria	Uc	No Criteria			
95	Nitrobenzene	Y	0.47		N	No detected value of B, Step 7		No	MEC<C & B is ND			
96	N-Nitrosodimethylamine	Y	0.47		N	No detected value of B, Step 7		No	MEC<C & B is ND			
97	N-Nitrosodi-n-Propylamine	Y	0.53		N	No detected value of B, Step 7		No	MEC<C & B is ND			
98	N-Nitrosodiphenylamine	Y	0.5		N	No detected value of B, Step 7		No	MEC<C & B is ND			
99	Phenanthrene	Y	0.45		N	No Criteria	No Criteria	Uc	No Criteria			
100	Pyrene	Y	0.46		N	No detected value of B, Step 7		No	MEC<C & B is ND			
101	1,2,4-Trichlorobenzene	Y	0.46		N	No Criteria	No Criteria	Uc	No Criteria			
102	Aldrin	Y				No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
103	alpha-BHC	Y				No detected value of B, Step 7		No	MEC<C & B is ND			
104	beta-BHC	Y	0.0015		N	No detected value of B, Step 7		No	MEC<C & B is ND			
105	gamma-BHC	Y	0.0027		N	No detected value of B, Step 7		No	MEC<C & B is ND			
106	delta-BHC	Y	0.0018		N	No Criteria	No Criteria	Uc	No Criteria			
107	Chlordane	Y	0.0013		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
108	4,4'-DDT	Y	0.0015		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
109	4,4'-DDE (linked to DDT)	Y	0.0013		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
110	4,4'-DDD	Y	0.0013		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
111	Dieldrin	Y	0.0015		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
112	alpha-Endosulfan	Y	0.0021		N	No detected value of B, Step 7		No	MEC<C & B is ND			
113	beta-Endolsulfan	Y	0.0021		N	No detected value of B, Step 7		No	MEC<C & B is ND			
114	Endosulfan Sulfate	Y	0.0012		N	No detected value of B, Step 7		No	MEC<C & B is ND			
115	Endrin	Y	0.0013		N	No detected value of B, Step 7		No	MEC<C & B is ND			
116	Endrin Aldehyde	Y	0.0019		N	No detected value of B, Step 7		No	MEC<C & B is ND			
117	Heptachlor	Y	0.0018		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
118	Heptachlor Epoxide	Y	0.00077		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
119-125	PCBs sum (2)	Y	0.046		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
126	Toxaphene	Y	0.18		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			

CTR#	Parameters	AQUATIC LIFE CALCULATIONS – Saltwater / Freshwater / Basin Plan: ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life	LIMITS: Lowest AMEL	Lowest MDEL	Recommendation
62	Benzo(b)Fluoranthene												No Limit
63	Benzo(ghi)Perylene												No Limit
64	Benzo(k)Fluoranthene												No Limit
65	Bis(2-Chloroethoxy)Methane												No Limit
66	Bis(2-Chloroethyl)Ether												No Limit
67	Bis(2-Chloroisopropyl)Ether												No Limit
68	Bis(2-Ethylhexyl)Phthalate												No Limit
69	4-Bromophenyl Phenyl Ether												No Limit
70	Butylbenzyl Phthalate												No Limit
71	2-Chloronaphthalene												No Limit
72	4-Chlorophenyl Phenyl Ether												No Limit
73	Chrysene												No Limit
74	Dibenzo(a,h)Anthracene												No Limit
75	1,2-Dichlorobenzene												No Limit
76	1,3-Dichlorobenzene												No Limit
77	1,4-Dichlorobenzene												No Limit
78	3,3 Dichlorobenzidine												No Limit
79	Diethyl Phthalate												No Limit
80	Dimethyl Phthalate												No Limit
81	Di-n-Butyl Phthalate												No Limit
82	2,4-Dinitrotoluene												No Limit
83	2,6-Dinitrotoluene												No Limit
84	Di-n-Octyl Phthalate												No Limit
85	1,2-Diphenylhydrazine												No Limit
86	Fluoranthene												No Limit
87	Fluorene												No Limit
88	Hexachlorobenzene												No Limit
89	Hexachlorobutadiene												No Limit
90	Hexachlorocyclopentadiene												No Limit
91	Hexachloroethane												No Limit
92	Indeno(1,2,3-cd)Pyrene												No Limit
93	Isophorone												No Limit
94	Naphthalene												No Limit
95	Nitrobenzene												No Limit
96	N-Nitrosodimethylamine												No Limit
97	N-Nitrosodi-n-Propylamine												No Limit
98	N-Nitrosodiphenylamine												No Limit
99	Phenanthrene												No Limit
100	Pyrene												No Limit
101	1,2,4-Trichlorobenzene												No Limit
102	Aldrin												No Limit
103	alpha-BHC												No Limit
104	beta-BHC												No Limit
105	gamma-BHC												No Limit
106	delta-BHC												No Limit
107	Chlordane												No Limit
108	4,4'-DDT												No Limit
109	4,4'-DDE (linked to DDT)												No Limit
110	4,4'-DDD												No Limit
111	Dieldrin												No Limit
112	alpha-Endosulfan												No Limit
113	beta-Endolsulfan												No Limit
114	Endosulfan Sulfate												No Limit
115	Endrin												No Limit
116	Endrin Aldehyde												No Limit
117	Heptachlor												No Limit
118	Heptachlor Epoxide												No Limit
119-125	PCBs sum (2)												No Limit
126	Toxaphene												No Limit

Notes:
Ud = Undetermined due to lack of data
Uc = Undetermined due to lack of CTR Water Quality Criteria
C = Water Quality Criteria
B = Background receiving water data