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Revised Tentative Order

- 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
<b>Conventional Pollutants</b>					
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	20	30	--	--
	lbs/day <sup>1</sup>	150	225	--	--
Oil and Grease	mg/L	10	15	--	--
	lbs/day <sup>1</sup>	75	113	--	--
pH	standard units	--	--	6.5	8.5
Total Suspended Solids (TSS)	mg/L	50	75	--	--
	lbs/day <sup>1</sup>	375	563	--	--
<b>Non-conventional Pollutants</b>					
Ammonia Nitrogen, Total (as N)	mg/L	0.42	1.3	--	--
	lbs/day <sup>1</sup>	3.2	9.8		
Chronic Toxicity <sup>2</sup>	Pass or Fail, % Effect	Pass <sup>3</sup>	Pass or % Effect <50	--	--
Temperature	°F	--	--	--	86
Total Residual Chlorine <sup>6</sup>	mg/L	--	0.1	--	--
	lbs/day <sup>1</sup>	--	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	
<i>Enterococcus</i>	CFU/100mL or MPN/100mL			4	
Dissolved Oxygen	mg/L			5	
<b>Priority Pollutants</b>					
Copper, Total Recoverable <sup>6</sup>	µg/L	2.9	5.8	--	--
	lbs/day <sup>1</sup>	0.022	0.044	--	--
Silver, Total Recoverable <sup>6</sup>	µg/L	1.1	2.2	--	--
	lbs/day <sup>1</sup>	0.0082	0.017	--	--
Cyanide, Total (as CN) <sup>6</sup>	µg/L	0.5	1.0	--	--
	lbs/day <sup>1</sup>	0.0038	0.0075	--	--

1. Mass limitations (lbs/day) are based on a maximum flow of 0.900 MGD and are calculated as follows:  

$$\text{Mass (lbs/day)} = \text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34 \text{ (conversion factor)}$$
 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**

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Revised Tentative Monitoring and Reporting Program

State Water Resource Control Board  
Quality Assurance Program Officer  
Office of Information Management and Analysis  
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**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<sup>1</sup>**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	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: -119.2105°
--	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

<sup>1</sup>. 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**

- 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 <sup>1</sup>	2
Total Residual Chlorine	mg/L	Grab	2/Quarter <sup>1</sup>	2
Copper, Total Recoverable	µg/L	Grab	2/Quarter <sup>1</sup>	2
Silver, Total Recoverable	µg/L	Grab	2/Quarter <sup>1</sup>	2
Cyanide, Total (as CN)	µg/L	Grab	2/Quarter <sup>1</sup>	2

- 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.
- 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**

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

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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.

#### **8.9. 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

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

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> 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.

<sup>4</sup> 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".

<sup>5</sup> Applied as an MMEL.

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

<sup>7</sup> 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



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