



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 - Internet Address: <http://www.waterboards.ca.gov/losangeles>

Linda S. Adams
Cal/EPA Secretary

Arnold Schwarzenegger
Governor

December 22, 2008

Mr. Frank Oakes, CEO
Stellar Biotechnologies, Inc.
417 East Hueneme Road, PMB #170
Port Hueneme, CA 93041

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED
No. 7008 1830 0004 3360 0991

WASTE DISCHARGE REQUIREMENTS - STELLAR BIOTECHNOLOGIES, INC, HUENEME AQUACULTURE PARK #452, LIGHTHOUSE CIRCLE, PORT HUENEME, CA (NPDES NO. CA0063070, CI NO. 7219, ORDER NO. R4-2008-0210)

Dear Mr. Oakes:

On November 20, 2008, the Los Angeles Regional Water Quality Control Board (Regional Board) issued Revised Tentative Waste Discharge Requirements (WDRs) for Stellar Biotechnologies, Inc. to incorporate intake water credits for copper.

Pursuant to Division 7 of the California Water Code, this Regional Board at a public hearing held on December 11, 2008, reviewed the revised tentative requirements, considered all factors in the case, and adopted Order No. R4-2008-0210 (copy attached) relative to this waste discharge.

This Order serves as a National Pollutant Discharge Elimination System (NPDES) permit, and expires on December 10, 2011. Section 13376 of the California Water Code requires that an application also referred to as a Report of Waste Discharge for a new permit must be filed at least 180 days before the expiration date.

The "Monitoring and Reporting Program" requires you to implement the monitoring program on the effective date of this Order, which is December 11, 2008. Your first monitoring report for the period of October 2008 through December 2008 is due by February 1, 2009. Monitoring reports should be sent to the Regional Board, ATTN: Information Technology Unit.

When submitting monitoring or technical reports to the Regional Board per these requirements please include a reference to Compliance File CI-7219 and NPDES No. CA0063070, which will assure that the reports, are directed to the appropriate file and staff. If you are submitting one report for both of your waste discharge permits NPDES No. CA0063070 and NPDES No. CA0064131 then submit two copies of the report. This will ensure that each file is complete and demonstrates compliance with the reporting requirements.

We are sending the final copy of the permit only to the Discharger. For those on the mailing list who would like access to a copy of the final permit, please go to the Regional Board's website at http://www.waterboards.ca.gov/losangeles/board/decisions/adopted_orders/by_permits_tools.shtml where you can search for the permit by order number.

California Environmental Protection Agency



Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.

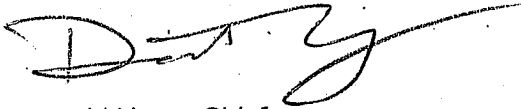
Mr. Frank Oakes
Stellar Biotechnologies, Inc.

- 2 -

December 22, 2008

If you have any questions, please contact Rebecca Christmann at (213) 576-6756 or via email at rchristmann@waterboards.ca.gov.

Sincerely,



David Hung, Chief
Watershed Regulatory Section

Enclosure: Order No. R4-2008-0210

cc: Robyn Stuber, Environmental Protection Agency, Region 9, Permits Branch (WTR-5)
Kenneth Wong, U.S. Army Corps of Engineers
Bryant Chesney, NOAA, National Marine Fisheries Service
Jane Tough, Department of Interior, U.S. Fish and Wildlife Service
Michael Levy, State Water Resources Control Board, Office of Chief Counsel
Philip Isorena, State Water Resources Control Board, Division of Water Quality
Stephanie Trotter, State Water Resources Control Board, Division of Water Quality
William Paznokas, Department of Fish and Game, Region 5
Barbara Fosbrink, California State Parks and Recreation
Teresa Henry, California Coastal Commission, South Coast District
Helen Mendoza, Water Replenishment District of Southern California
Tim Smith, Los Angeles County, Department of Public Works, Waste Management Division
Kurt Souza, Los Angeles County, Department of Health Services, Sanitary Engineering
Section
Richard Wagner, Los Angeles County, Department of Health Services, Public Water Supply
Branch
Robert Gallagher, Ventura County Department of Public Health
Gerhardt Hubner, Ventura County Watershed Protection District
Mark Gold, Heal the Bay
Kirsten James, Heal the Bay
Tom Ford, Santa Monica Baykeeper
Titiana Gaur, Santa Monica Baykeeper
David Beckman, Natural Resources Defense Council
Daniel Cooper, Lawyers for Clean Water
Mati Waiya, Wishtoyo Foundation/Ventura Coastkeeper
Jae Kim, Tetra Tech

California Environmental Protection Agency



Recycled Paper

Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.

California Regional Water Quality Control Board Los Angeles Region

320 West 4th Street, Suite 200, Los Angeles CA 90013-2343
Phone (213) 576-6600 • Fax (213) 576-6640
<http://www.waterboards.ca.gov>

**ORDER NO. R4-2008-0210
AMENDING ORDER NO. R4-2007-0004
NPDES NO. CA0063070**

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Discharger	Stellar Biotechnologies, Inc.
Name of Facility	Stellar Biotechnologies, Inc.
Facility Address	Hueneme Aquaculture Park #452, Lighthouse Circle
	Port Hueneme, CA
	Ventura County

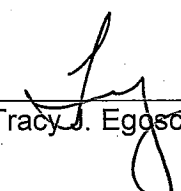
The Discharger is authorized to discharge from the following discharge points as set forth below:

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Aquaculture wastewater	34 °, 08', 36" N	119°, 13', 48" W	Port Hueneme Harbor

This Order was adopted by the Regional Water Board on:	December 11, 2008
This Order shall become effective on:	December 11, 2008
This Order shall expire on:	December 10, 2011
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Board have classified this discharge as a minor discharge.	
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that Order No. 01-075 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, and the provisions of the federal CWA, and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements herein.

I, Tracy J. Egoscue, Executive Officer, do certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region on December 11, 2008.


 Tracy J. Egoscue, Executive Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
 REGION 4, LOS ANGELES REGION**

ORDER NO. R4-2008-0210
 AMENDING ORDER NO. R4-2007-0004
 NPDES NO. CA0063070

TABLE OF CONTENTS

I.	Facility Information.....	3
II.	Findings.....	4
III.	Discharge Prohibitions.....	9
IV.	Effluent Limitations and Discharge Specifications.....	10
	A. Effluent Limitations – Discharge Point 001.....	10
	1. Final Effluent Limitations – Discharge Point 001.....	10
	2. Interim Effluent Limitations – Not Applicable.....	12
	B. Land Discharge Specifications – Not Applicable.....	12
	C. Reclamation Specifications – Not Applicable.....	12
V.	Receiving Water Limitations.....	13
	A. Surface Water Limitations.....	13
	B. Groundwater Limitations.....	15
VI.	Provisions.....	16
	A. Standard Provisions.....	16
	B. Monitoring and Reporting Program Requirements.....	18
	C. Special Provisions.....	18
	1. Reopener Provisions.....	18
	2. Special Studies, Technical Reports and Additional Monitoring Requirements.....	18
	3. Best Management Practices and Pollution Prevention.....	19
	a. Best Management Practice Plan (BMPP).....	19
	4. Compliance Schedules.....	19
	5. Construction, Operation and Maintenance Specifications.....	19
	6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable.....	19
	7. Other Special Provisions – Not Applicable.....	19
VII.	Compliance Determination.....	20
	A. Single Constituent Effluent Limitation.....	20
	B. Effluent Limitations Expressed as a Sum of Several Constituents.....	20
	C. Effluent Limitations Expressed as a Median.....	20
	D. Mass-based Effluent Limitations.....	20
	E. Average Monthly Effluent Limitation (AMEL).....	20
	F. Maximum Daily Effluent Limitation (MDEL).....	21
	G. Instantaneous Minimum Effluent Limitation.....	21
	H. Instantaneous Maximum Effluent Limitation.....	21
	I. Mean Annual Effluent Limitation (MAEL).....	21
	Attachment A – Definitions, Acronyms, And Abbreviations.....	A-1
	Attachment B – Topographic Map.....	B-1
	Attachment C – Flow Schematic.....	C-1
	Attachment D – Federal Standard Provisions.....	D-1
	Attachment E – Monitoring And Reporting Program (Mrp) No. 6038.....	E-1
	Attachment F – Fact Sheet.....	F-1
	Attachment G – State Water Board Minimum Levels.....	G-1
	Attachment H – Priority Pollutants List.....	H-1
	Attachment I.....	I-1

STELLAR BIOTECHNOLOGIES, INC.
STELLAR BIOTECHNOLOGIES, INC. FACILITY
ORDER NO. R4-2008-0210
AMENDING ORDER NO. R4-2007-0004
NPDES NO. CA0063070

I. FACILITY INFORMATION

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Discharger	Stellar Biotechnologies, Inc.
Name of Facility	Stellar Biotechnologies, Inc.
Facility Address	Hueneme Aquaculture Park #452, Lighthouse Circle
	Port Hueneme, CA
	Ventura County
Facility Contact, Title, and Phone	Frank Oakes, Facility Manager, (805) 488-2147 ext. 106
Mailing Address	417 East Hueneme Road, #170 Port Hueneme, CA 93041
Type of Facility	Non-municipal (aquaculture facility)
Facility Design Flow	4.32 mgd (maximum permitted flow)

II. FINDINGS

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

- A. Background.** Stellar Biotechnologies, Inc. (hereinafter Discharger) is currently discharging under Order No. 01-075 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0063070. The Discharger submitted a Report of Waste Discharge, dated November 10, 2005 and applied for a NPDES permit renewal to discharge up to 4.32 mgd of untreated wastewater from Stellar Biotechnologies, Inc. Facility, hereinafter Facility.
- B. Facility Description.** The Discharger owns and operates the marine Facility located in southwest jetty of Port Hueneme Harbor in the City of Hueneme. The Facility is a marine aquaculture nursery and hatchery that husband and propagates various native marine organisms. The Facility supplies marine derived products to the pharmaceutical industry for use in the development of various cancer vaccines and other pharmaceutical uses. The facility obtains its intake water, from the harbor entrance through a 6-inch pipe extending approximately 70 feet from the shore at the south bank of the Port Hueneme Harbor entrance. Intake water is pumped to a series of tanks that house the marine organisms. The wastewater generated is discharged from Discharge Point 001 (see table on cover page) located close to the mouth of Port Hueneme Harbor, a water of the United States within Ventura County Coastal Watershed. Attachment B provides a topographic map of the area around the facility. Attachment C provides a flow schematic of the facility.
- C. Legal Authorities.** This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.
- D. 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 through special studies. Attachments A through I which contain background information and rationale for Order requirements, are hereby incorporated into this Order and, thus, constitute part of the Findings for this Order.
- E. California Environmental Quality Act (CEQA).** This action to adopt a NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC.
- F. Technology-based Effluent Limitations.** Title 40 of the Code of Federal Regulations at section 122.44(a)¹ requires that permits include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations based on Best Professional Judgment (BPJ) in accordance with section 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).
- G. Water Quality-based Effluent Limitations.** Section 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and

¹ All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, section 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter.

H. Water Quality Control Plans. The Regional Water Board adopted a *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (hereinafter 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 plan. Beneficial uses applicable to Port Hueneme Harbor are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Port Hueneme Harbor	<u>Existing:</u> Industrial Process Supply (PROC), navigation (NAV), contact water recreation (REC-1), and non-contact water recreation (REC-2), commercial and sport fishing (COMM), marine habitat (MAR), wildlife habitat (WILD), shellfish harvesting (SHELL), and rare, threatened or endangered species (RARE). <u>Potential:</u> Spawning, reproduction, and/or early development (SPAWN)

Ammonia Basin Plan Amendment. The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through 3-4. However, those ammonia objectives were revised on March 4, 2004, by the Regional Water Board with the adoption of Resolution No. 2004-022, Amendment to the *Water Quality 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"*. The ammonia Basin Plan amendment was approved by the Office of Administrative Law on September 15, 2004 and by USEPA on May 19, 2005. The amendment revised the Basin Plan by updating the ammonia objectives for inland surface waters not characteristic of freshwater such that they are consistent with the USEPA *"Ambient Water Quality Criteria for Ammonia (Saltwater) - 1989."* The amendment revised the regulatory provisions of the Basin Plan by adding language to Chapter 3, "Water Quality Objectives."

The amendment contains objectives for a 4-day average concentration of un-ionized ammonia of 0.035 mg/L, and a 1-hour average concentration of un-ionized ammonia of 0.233 mg/L. The objectives are fixed concentrations of un-ionized ammonia, independent of pH, temperature, or salinity. The amendment also contains an implementation procedure to convert un-ionized ammonia objectives to total ammonia effluent limitations. The implementation plan as outlined is to be used to determine the appropriate effluent limit for Total Nitrogen.

The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters. Subsequently, 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, topmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. A survey was completed for several kinds of fish and the 86 °F temperature was found to be protective. The new temperature effluent limitation was developed that is reflective of new information available that indicates that the 100 °F temperature is not protective of aquatic organisms, but that 86°F is protective.

Requirements of this Order specifically implement the applicable Water Quality Control Plans.

- I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. On May 18, 2000, USEPA 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 water quality criteria for priority pollutants.
- J. **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 USEPA 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 USEPA 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 included in this Order implement the SIP.

Intake Water Credits. 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 the following conditions are met:

- (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 that pollutant;
- (2) The intake water credits provided are consistent with any total maximum daily load (TMDL) applicable to the discharge that has been approved by the Regional Water Board, State Water Board, and USEPA;
- (3) The intake water is from the same water body 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 manner 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.

Based on the monitoring data submitted since 2007 and additional information, the Discharger has demonstrated that the above conditions are met. Therefore, this Order has been revised to include effluent limitations for copper based on the intake water credits. A detailed discussion of the basis for the intake water credits for the copper effluent limitations is included in the Fact Sheet (Attachment F).

- K. Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a discharger's request and demonstration that it is infeasible for an existing discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under Section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does not include compliance schedules and interim effluent limitations.
- L. Antidegradation Policy.** Section 131.12 requires that 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 No. 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet (Attachment F) the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution 68-16.
- M. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 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.
- N. Monitoring and Reporting.** Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to

implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

- O. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (40 C.F.R. § 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.
- P. Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (BOD), oil and grease, total suspended solids (TSS), and turbidity. Restrictions on biochemical oxygen demand (BOD), oil and grease, total suspended solids (TSS), and turbidity are specified in federal regulations as discussed in section IV.B in the Fact Sheet, and the permit's technology-based pollutant restrictions are no more stringent than required by the CWA. Water quality-based effluent limitations (WQBELs) have been scientifically 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 section 131.38. The scientific procedures for calculating the individual WQBELs are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.
- Q. Standard and Special Provisions.** Standard Provisions, which in accordance with sections 122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).
- R. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F) of this Order.
- S. 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 (Attachment F) of this Order.

III. DISCHARGE PROHIBITIONS

- A. 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 the storm drain system or other waters of the State, are prohibited.
- C. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the CWC.
- 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 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 Regional Water 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 or high level radiological waste is prohibited.
- 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.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

- a. The discharge of aquaculture wastewater shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Average Monthly	Final Effluent Limitations		
			Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
<i>Conventional Pollutants</i>					
Biochemical Oxygen Demand	mg/L	20	30	---	---
5-day @ 20°C (BOD)	lbs/day ¹	721	1,081	---	---
Oil and Grease	mg/L	10	15	---	---
	lbs/day ¹	360	540	---	---
Ph	standard units	---	---	6.5	8.5
Total Suspended Solids (TSS)	mg/L	50	75	---	---
	lbs/day ¹	1,801	2,702	---	---
<i>Priority Pollutants</i>					
Copper, Total Recoverable ²	µg/L	2.9 ²	5.8 ²	---	---
	lbs/day ¹	0.1	0.21	---	---
Zinc, Total Recoverable	µg/L	47	95	---	---
	lbs/day ¹	1.7	3.4	---	---
<i>Non-Conventional Pollutants/Parameters</i>					
Flow	MGD	---	4.32	---	---
Temperature	°F	---	86	---	---
Turbidity	NTU	50	75	---	---

¹ Based on a flow of 4.32 MGD. If the flow is lower than the maximum design flow, the final effluent mass must be recalculated utilizing the actual flow.

² If the influent water copper (Cu) concentration does not exceed the average monthly limitation then the limitations are applied as noted in the table. If the influent water copper 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 copper 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. When determining compliance based on intake water credit, the copper effluent limitation is equal to the maximum copper concentration in the influent water. The equation is as follows:

$$\text{Cu Effluent Limitation with Intake Water Credit} = \text{Maximum Cu Influent Water Concentration}$$

- b. A log mean fecal coliform concentration of 200 MPN/100 ml (based on a minimum of not less than four samples for any 30-day period), and a value of 400 MPN/100ml for more than 10 percent of the total samples during any 30-day period.
- c. A mean annual dissolved oxygen concentration of at least 7 mg/L, with no single determination of less than 5.0 mg/L
- d. Total un-ionized NH_3/L ammonia concentrations of 0.035 mg/L for the 4-day average and 0.233 mg/L for the one-hour average. These values are to be translated utilizing the implementation procedure included in Resolution No. 2004-022 which revised the saltwater ammonia concentrations in the 1994 Basin Plan.

The implementation procedure requires:

1. Determine the applicable water quality objectives for ammonia for the receiving water immediately downstream of the discharge (utilize the Determination of Freshwater, Brackish Water or Saltwater Conditions included in the Implementation section of Resolution No. 2004-022).
2. Since there is no mixing zone established;
ECA = WQO
3. To adjust the un-ionized saltwater ammonia objective to an ECA expressed as total ammonia, the following equation shall be used:

$$[\text{NH}_4^+] + [\text{NH}_3] = [\text{NH}_3] + [\text{NH}_3] \cdot 10^{(pK_a^s + 0.0324(298-T) + 0.0415 P/T - \text{pH})}$$

Where: P = 1 atm

T = temperature ($^{\circ}\text{K}$)

$pK_a^s = 0.116 \cdot I + 9.245$, the stoichiometric acid hydrolysis constant of ammonium ions in saltwater based on I

I = $19.9273 \text{ S} (1000 - 1.005109 \text{ S})^{-1}$, the molal ionic strength of saltwater based on S

S = salinity

STELLAR BIOTECHNOLOGIES, INC.
STELLAR BIOTECHNOLOGIES, INC. FACILITY
ORDER NO. R4-2008-0210
AMENDING ORDER NO. R4-2007-0004
NPDES NO. CA0063070

(Per U.S. EPA Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989)

- 2. Interim Effluent Limitations – Not Applicable**
- B. Land Discharge Specifications – Not Applicable**
- C. Reclamation Specifications – Not Applicable**

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in Port Hueneme Harbor:

1. The normal ambient pH to fall below 6.5 nor exceed 8.5 units nor vary from normal ambient pH levels by more than 0.5 units.
2. Depress the concentration of dissolved oxygen to fall below 5.0 mg/L anytime, and the median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation.
3. Surface water temperature to rise greater than 5 °F above the natural temperature of the receiving water at any time or place. The temperature of the receiving water shall not be raised above 80 °F as a result of waste discharged.
4. Exceed total ammonia (as N) concentrations specified in the Regional Water Board Resolution No. 2002-011. Resolution No. 2002-011 revised the ammonia criteria in the 1994 Basin Plan, to be consistent with the 1999 USEPA update on ammonia criteria. Adopted on April 28, 2002, Resolution No. 2002-011 was approved by State Water Board, Office of Administrative Law and USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively and is now in effect.
5. The presence of visible, floating, suspended or deposited macroscopic particulate matter or foam.
6. 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.
7. Suspended or settleable materials, chemical substances or pesticides in amounts that cause nuisance or adversely affect any designated beneficial use.
8. 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.
9. Accumulation of bottom deposits or aquatic growths.
10. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.
11. The presence of substances that result in increases of biochemical oxygen demand that adversely affect beneficial uses.
12. 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.

13. Alteration of turbidity, or apparent color beyond natural background levels.
14. Damage, discolor, nor cause formation of sludge deposits on flood control structures or facilities nor overload the design capacity.
15. Degrade surface water communities and populations including vertebrate, invertebrate, and plant species.
16. Problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.
17. Create a nuisance, or adversely effect beneficial uses of the receiving water.
18. Toxicity limitations for discharges from Outfalls 001

a. Acute Toxicity Limitation and Requirements

1. The acute toxicity of the effluent shall be such that: (i) the average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and (ii) no single test producing less than 70 % survival.
2. If either of the above requirements (Section V.A.18.1) is not met, the Discharger shall conduct six additional tests over a six-week period. The discharger shall ensure that they receive results of a failing acute toxicity test within 24 hours of the close of the test and the additional tests shall begin within 3 business days of the receipt of the result. If the additional tests indicate compliance with acute toxicity limitation, the discharger may resume regular testing. However, if the results of any two of the six accelerated tests are less than 90% survival, then the Discharger shall begin a Toxicity Identification Evaluation (TIE). The TIE shall include all reasonable steps to identify the sources of toxicity. Once the sources are identified, the Discharger shall take all reasonable steps to reduce toxicity to meet the objective.
3. If the initial test and any of the additional six acute toxicity bioassay test result in less than 70% survival, including the initial test, the Discharger shall immediately begin a TIE.
4. The Discharger shall conduct acute toxicity monitoring as specified in Monitoring and Reporting Program (MRP) No. 7219.

b. Chronic Toxicity Limitation and Requirements:

1. This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed 1.0 TU_c in a critical life stage test.)
2. If the chronic toxicity of the effluent exceeds 1.0 TU_c, the Discharger shall immediately implement an accelerated chronic toxicity testing according

to MRP No. 7219, Section V.E. If the results of two of the six accelerated tests exceed 1.0 TU_c, the Discharger shall initiate a TIE and implement the Initial Investigation TRE Workplan. (see MRP No. 7219, Section V.E.).

3. The Discharger shall conduct chronic toxicity monitoring as specified in MRP No. 7219.
4. The chronic toxicity of the effluent shall be expressed and reported in toxic units, where:

$$TU_c = \frac{100}{NOEC}$$

The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

5. Preparation of an Initial Investigation TRE Workplan

The Discharger shall submit a detailed initial investigation Toxicity Reduction Evaluation (TRE) workplan to the Executive Officer of the Regional Board for approval within 90 days of the effective date of this permit. The Discharger shall use EPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance or current versions. At a minimum, the TRE workplan must contain the provisions in Attachment C. This workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at a minimum:

- i. 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;
- ii. A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility; and,
- iii. If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor) (See MRP Section IV.G.2.c. for guidance manuals).

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

- (1) Violation of any term or condition contained in this Order;
 - (2) Obtaining this Order by misrepresentation, or failure to disclose all relevant facts; and
 - (3) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- i. If there is any storage of hazardous or toxic materials or hydrocarbons at this facility and if the facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.
 - j. The Discharger shall notify the Regional Water Board not later than 120 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing or processing facility by more than 10%. 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 appropriate filing fee.
 - k. The Discharger shall file with the Regional Water Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.
 - l. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.
 - m. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify the Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Regional Water Board.
 - n. The CWC provides that any person who violates a waste discharge requirement or a provision of the CWC is subject to civil penalties of up to \$5,000 per day, \$10,000 per day, or \$25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to \$10 per gallon per day or \$25 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations. 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.
 - o. 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.
 - p. 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.

- q. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to 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:

- (1) Name and general composition of the chemical,
- (2) Frequency of use,
- (3) Quantities to be used,
- (4) Proposed discharge concentrations, and
- (5) USEPA registration number, if applicable.

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the Monitoring and Reporting Program (MRP) and future revisions thereto, in Attachment E of this Order. If there is any conflict between provisions stated in MRP and the Standard Provisions, those provisions stated in the MRP shall prevail.

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 will 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 reasonable potential analysis (RPA).
- c. This Order may be reopened and modified, in accordance with the provisions set forth in Parts 122 and 124, to include requirements for the implementation of the watershed management approach or to include new Minimum Levels (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 total maximum daily load (TMDL) for the Port Hueneme Harbor.
- e. This Order may be reopened upon the submission by the Discharger of adequate information, as determined by the Regional Water Board, to provide for dilution credits or a mixing zone, as may be appropriate.
- f. This Order may be reopened upon the submission by the Discharger of adequate information, as determined by the Regional Water Board, to provide for intake water credits for priority pollutants, as may be appropriate.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Toxicity Reduction Evaluation (TRE) Workplan.** Within 90 days of the effective date of this permit, the Discharger is required to submit a TRE workplan. This plan shall describe the steps the permittee intends to follow in the event toxicity is detected. The

Discharger shall develop the TRE workplan in accordance with the specification discussed in Section V of the MRP, Attachment E.

Chemical Use Report. The Discharger shall submit to the Regional Water Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect the waste discharge, including quantities of each. The Discharger shall monitor and report chemicals used at the Facility in accordance with the specification discussed in Section IX.B of the MRP, Attachment E.

3. Best Management Practices and Pollution Prevention

a. Best Management Practice Plan (BMPP).

Within 90 days of the effective date of this permit, the Discharger is required to submit a Best Management Practice Plan (BMPP) to the Regional Water Board. This plan shall entail site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the State. The Discharger shall develop BMPP in accordance with the specification discussed in Section IX.B of the MRP, Attachment E.

4. Compliance Schedules

Not Applicable

5. Construction, Operation and Maintenance Specifications

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

6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

7. Other Special Provisions – 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 ML (see Reporting Requirement in Section I.G of the MRP, Attachment E), 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 "Not Detected" (ND) or "Detected, but Not Quantified" (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 $= [X_{n/2} + X_{(n/2)+1}]$, i.e., the midpoint between the $n/2$ and $n/2+1$ data points.

D. Mass-based Effluent Limitations.

In calculating mass emission rates from the monthly average concentrations, use one half of the method detection limit for ND and the estimated concentration for DNQ for the calculation of the monthly average concentration. To be consistent with Section VII.B of this Order, if all pollutants belonging to the same group are reported as ND or DNQ, the sum of the individual pollutant concentrations should be considered as zero for the calculation of the monthly average concentration.

E. Average Monthly Effluent Limitation (AMEL).

If the average of daily discharges over a calendar month exceeds the AMEL 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 non-compliance in a 31-day month). The average of daily discharges over the calendar month that exceeds the AMEL for a parameter will be considered out of compliance for that month only. 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.

For any one 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 that month;

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 month. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later.

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

When one or more sample results are reported as "Not-Detected (ND)" or "Detected, but Not Quantified (DNQ)" (see Reporting Requirement I.G. of the MRP), the median value of these four samples shall be used for compliance determination. If one or both of the middle values is ND or DNQ, the median shall be the lower of the two middle values.

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

F. Maximum Daily Effluent Limitation (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. Mean Annual Effluent Limitation (MAEL).

If the average of daily discharges over a calendar year exceeds the MAEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that year for that parameter (e.g., resulting in 365 days of non-compliance in a 365-day month). The average of daily discharges over the calendar year that exceeds the MAEL for a parameter will be considered out of compliance for that year only. If

STELLAR BIOTECHNOLOGIES, INC.
STELLAR BIOTECHNOLOGIES, INC. FACILITY
ORDER NO. R4-2008-0210
AMENDING ORDER NO. R4-2007-0004
NPDES NO. CA0063070

only a single sample is taken during the calendar year and the analytical result for that sample exceeds the MAEL, the discharger will be considered out of compliance for that calendar year. For any one calendar year during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar year.

ATTACHMENT A – DEFINITIONS, ACRONYMS, AND ABBREVIATIONS

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.

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

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

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

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.

Mean Annual Effluent Limitation (MAEL): the highest allowable average of daily discharges over a calendar year, calculated as the sum of all daily discharges measured during a calendar year divided by the number of daily discharges measured during that year.

µg/L: micrograms per Liter

mg/L: milligrams per Liter

MGD: million gallons per day

Six-month Median Effluent Limitation: the highest allowable moving median of all daily discharges for any 180-day period.

ACRONYMS AND ABBREVIATIONS

AMEL	Average Monthly Effluent Limitation
B	Background Concentration
BAT	Best Available Technology Economically Achievable
Basin Plan	Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BMPPP	Best Management Practices Plan
BPJ	Best Professional Judgment
BOD	Biochemical Oxygen Demand
BPT	Best practicable treatment control technology
C	Water Quality Objective
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CTR	California Toxics Rule
CV	Coefficient of Variation
CWC	California Water Code
Discharger	Stellar Biotechnologies, Inc.
DMR	Discharge Monitoring Report
DNQ	Detected But Not Quantified
ECA	Effluent Concentration Allowance
ELAP	California Department of Health Services Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines and Standards
Facility	Port Hueneme Aquaculture Park
gpd	gallons per day
IC	Inhibition Coefficient
IC15	Concentration at which the organism is 15% inhibited
IC25	Concentration at which the organism is 25% inhibited
IC40	Concentration at which the organism is 40% inhibited
IC50	Concentration at which the organism is 50% inhibited
LA	Load Allocations
LOEC	Lowest Observed Effect Concentration
LTA	Long-Term Average
MDEL	Maximum Daily Effluent Limitation
MEC	Maximum Effluent Concentration
MGD	Million Gallons Per Day
ML	Minimum Level
MRP	Monitoring and Reporting Program
ND	Not Detected
NOEC	No Observable Effect Concentration
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NTR	National Toxics Rule
OAL	Office of Administrative Law
POTW	Publicly Owned Treatment Works
PMP	Pollutant Minimization Plan
QA	Quality Assurance

STELLAR BIOTECHNOLOGIES, INC.
STELLAR BIOTECHNOLOGIES, INC. FACILITY
ORDER NO. R4-2008-0210
AMENDING ORDER NO. R4-2007-0004
NPDES NO. CA0063070

QA/QC

Quality Assurance/Quality Control

Regional Water Board

California Regional Water Quality Control Board, Los Angeles Region

RPA

Reasonable Potential Analysis

SCP

Spill Contingency Plan

SIP

State Implementation Policy (Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California)

SMR

Self Monitoring Reports

State Water Board

California State Water Resources Control Board

SWPPP

Storm water Pollution Prevention Plan

TAC

Test Acceptability Criteria

Thermal Plan

Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California

TIE

Toxicity Identification Evaluation

TMDL

Total Maximum Daily Load

TOC

Total Organic Carbon

TRE

Toxicity Reduction Evaluation

TSD

Technical Support Document

TSS

Total Suspended Solid

TU

Toxicity Unit

USEPA

United States Environmental Protection Agency

WDR

Waste Discharge Requirements

WET

Whole effluent toxicity

WLA

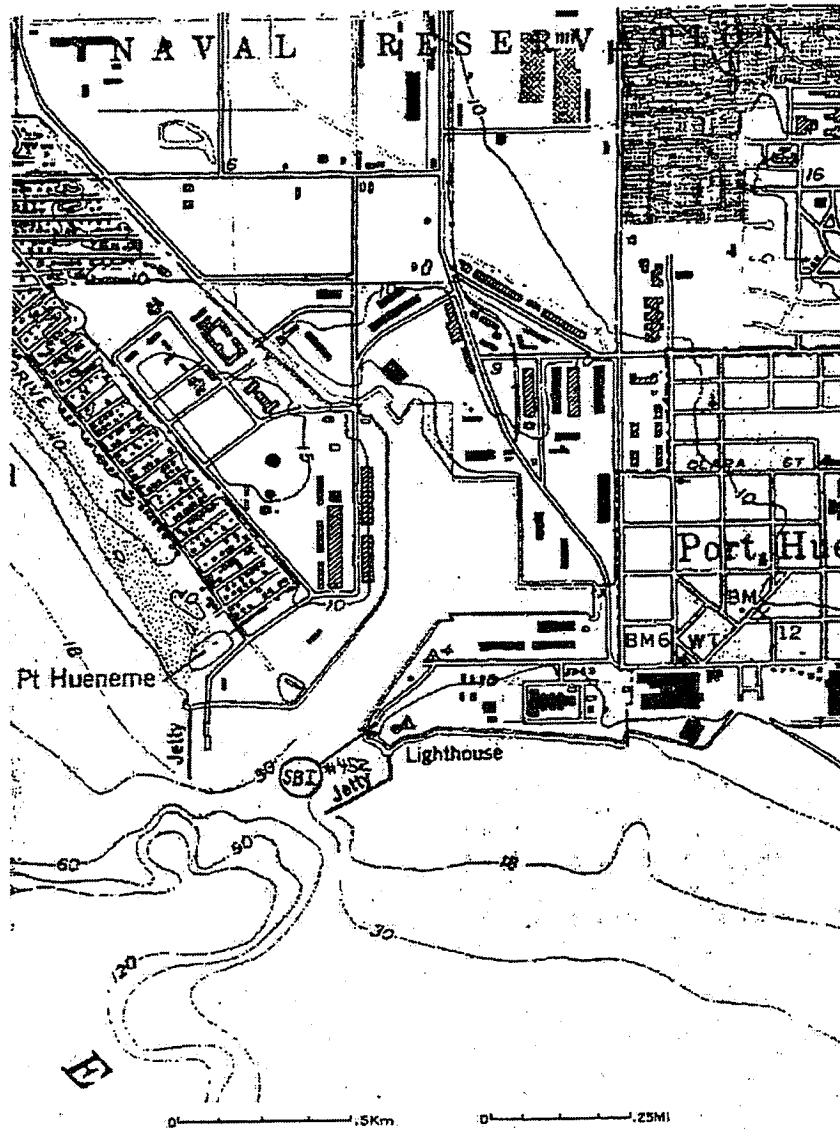
Waste Load Allocations

WQBELs

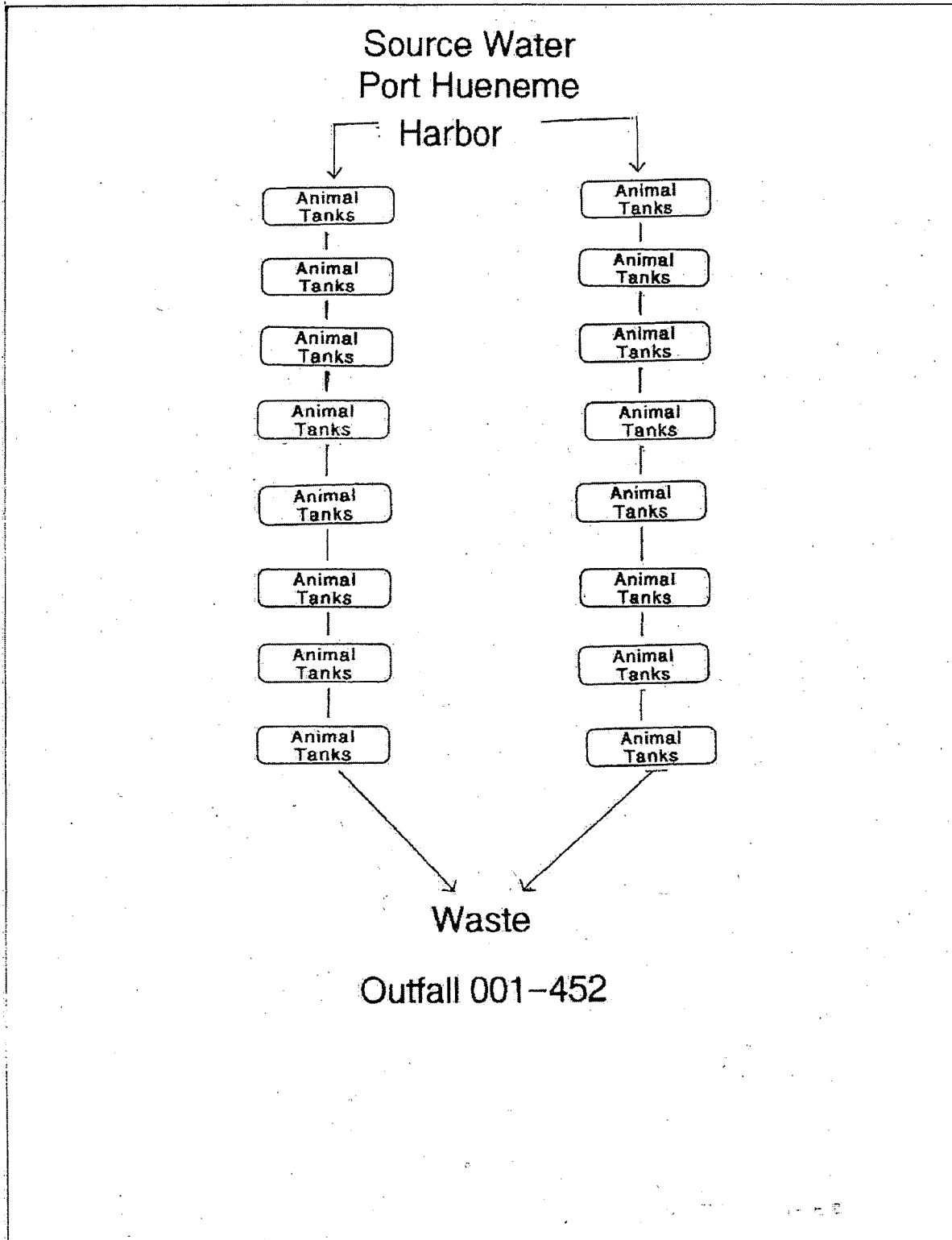
Water Quality-Based Effluent Limitations

ATTACHMENT B – TOPOGRAPHIC MAP

FIGURE 1. LOCATION OF SBI AT PORT HUENEME HARBOR



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – FEDERAL STANDARD PROVISIONS

I. Standard Provisions – Permit Compliance

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the CWA and the CWC and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [40 C.F.R. §122.41(a)].
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement [40 C.F.R. §122.41(a)(1)].

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, USEPA, 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 [40 C.F.R. §122.41(i)] [CWC 13383(c)]:

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 [40 C.F.R. §122.41(i)(1)];
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [40 C.F.R. §122.41(i)(2)];
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [40 C.F.R. §122.41(i)(3)];
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location [40 C.F.R. §122.41(i)(4)].

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 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)(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)(B)]; and

- c. The Discharger submitted notice to the Regional Water Board as required under Standard Provision – Permit Compliance I.G.5 below [40 C.F.R. §122.41(m)(4)(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 [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 [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 permittee. 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 paragraph H.2 of this section 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 [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 CWC [40 C.F.R. §122.41(l)(3)] [40 C.F.R. §122.61].

III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 C.F.R. §122.41(j)(1)].
- B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order [40 C.F.R. §122.41(j)(4)] [40 C.F.R. §122.44(i)(1)(iv)].

IV. STANDARD PROVISIONS – RECORDS

- A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [40 C.F.R. §122.41(j)(2)].
- B. Records of monitoring information shall include:
 1. The date, exact place, and time of sampling or measurements [40 C.F.R. §122.41(j)(3)(i)];
 2. The individual(s) who performed the sampling or measurements [40 C.F.R. §122.41(j)(3)(ii)];

3. The date(s) analyses were performed [40 C.F.R. §122.41(j)(3)(iii)];
4. The individual(s) who performed the analyses [40 C.F.R. §122.41(j)(3)(iv)];
5. The analytical techniques or methods used [40 C.F.R. §122.41(j)(3)(v)]; and
6. The results of such analyses [40 C.F.R. §122.41(j)(3)(vi)].

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA 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 USEPA copies of records required to be kept by this Order [40 C.F.R. §122.41(h)] [CWC 13267].

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with paragraph (2.) and (3.) of this provision [40 C.F.R. §122.41(k)].
2. All permit applications shall be signed as follows:
 - a. For a corporation: 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)];
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [40 C.F.R. §122.22(a)(2)]; or

- c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA) [40 C.F.R. §122.22(a)(3)].
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in paragraph (b) of this provision, 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 paragraph (2.) of this provision [40 C.F.R. §122.22(b)(1)];
 - b. The authorization specified 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, State Water Board, or USEPA [40 C.F.R. §122.22(b)(3)].
4. If an authorization under paragraph (3.) of this provision 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 paragraph (3.) of this provision must be submitted to the Regional Water Board, SWRCB or USEPA 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 paragraph (2.) or (3.) of this provision 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)].

C. Monitoring Reports

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

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices [40 C.F.R. §122.41(l)(4)(i)].
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [40 C.F.R. §122.41(l)(4)(ii)].
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [40 C.F.R. §122.41(l)(4)(iii)].

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that 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 written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission 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 [40 C.F.R. §122.41(l)(6)(i)].
2. The following shall be included as information that must be reported within 24 hours under this paragraph [40 C.F.R. §122.41(l)(6)(ii)]:
 - 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)].
 - c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [40 C.F.R. §122.41(l)(6)(ii)(C)].
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [40 C.F.R. §122.41(l)(6)(iii)].

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 which are subject neither to effluent limitations in this Order nor to notification requirements under Part 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [40 C.F.R. §122.41(l)(1)(ii)].
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [40 C.F.R. §122.41(l)(1)(iii)].

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order 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 E.3, E.4, and E.5 at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E [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 USEPA, the Discharger shall promptly submit such facts or information [40 C.F.R. §122.41(l)(8)].

VI. STANDARD PROVISIONS – ENFORCEMENT

- A.** The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than

one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Clean Water Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions [40 C.F.R. §122.41(a)(2)] [CWC 13385 and 13387].

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

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

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [40 C.F.R. §122.42(a)(1)]:
 - a. 100 micrograms per liter ($\mu\text{g/L}$) [40 C.F.R. §122.42(a)(1)(i)];
 - b. 200 $\mu\text{g/L}$ for acrolein and acrylonitrile; 500 $\mu\text{g/L}$ for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (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 40 C.F.R. §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 $\mu\text{g/L}$ [40 C.F.R. §122.42(a)(2)(i)];
 - b. 1 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 40 C.F.R. §122.44(f) [40 C.F.R. §122.42(a)(2)(iv)].

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following [40 C.F.R. §122.42(b)]:

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants [40 C.F.R. §122.42(b)(1)]; and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order [40 C.F.R. §122.42(b)(2)].

STELLAR BIOTECHNOLOGIES, INC.
STELLAR BIOTECHNOLOGIES, INC. FACILITY
ORDER NO. R4-2008-0210
AMENDING ORDER NO. R4-2007-0004
NPDES NO. CA0063070

Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW [40 C.F.R. §122.42(b)(3)].

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

TABLE OF CONTENTS

Attachment E – Monitoring and Reporting Program (MRP).....	E-2
I. General Monitoring Provisions.....	E-2
II. Monitoring Locations.....	E-4
III. Influent Monitoring Requirements.....	E-5
A. Monitoring Location INF-001.....	E-5
IV. Effluent Monitoring Requirements.....	E-5
A. Monitoring Location EFF-001.....	E-5
V. Whole Effluent Toxicity Testing Requirements.....	E-6
A. Definition of Toxicity.....	E-6
B. Acute Toxicity Effluent Monitoring Program.....	E-7
C. Chronic Toxicity Effluent Monitoring Program.....	E-7
D. Quality Assurance.....	E-8
E. Accelerated Monitoring and Initial Investigation TRE Trigger.....	E-8
F. Toxicity Reduction Evaluation (TRE)/ Toxicity Identification Evaluation (TIE) Trigger.....	E-8
G. Steps in TRE and TIE Procedures.....	E-9
H. Reporting.....	E-10
VI. Land Discharge Monitoring Requirements.....	E-11
VII. Reclamation Monitoring Requirements.....	E-11
VIII. Receiving Water Monitoring Requirements – SURFACE WATER AND GROUNDWATER.....	E-11
A. Monitoring Location RSW-001.....	E-11
B. Visual Monitoring of Receiving Water Sampling Point.....	E-12
IX. Other Monitoring Requirements.....	E-12
A. Best Management Practices Plan (BMPP).....	E-12
B. Chemical Use Report.....	E-13
X. Reporting Requirements.....	E-13
A. General Monitoring and Reporting Requirements.....	E-13
B. Self Monitoring Reports (SMRs).....	E-14
C. Discharge Monitoring Reports (DMRs).....	E-15
D. Other Reports.....	E-15

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Section 122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

- A. An effluent sampling station shall be established for the point of discharge (Discharge Point 001) and shall be located where representative samples of that effluent can be obtained.
- B. Effluent samples shall be taken downstream of all operations and/or treatment works and prior to mixing with the receiving waters.
- C. This 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 sections 136.3, 136.4, and 136.5 (revised May 14, 1999); or, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. Laboratories analyzing effluent samples and receiving water samples shall be certified by the California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer and must include quality assurance/quality control (QA/QC) data in 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.
- E. For any analyses performed for which no procedure is specified in the USEPA guidelines or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.
- F. Each monitoring report must affirm in writing that "all analyses were conducted at a laboratory certified for such analyses by the Department of Health Services or approved by the Executive Officer and in accordance with current USEPA guideline procedures or as specified in this Monitoring and Reporting Program".
- G. The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), and the 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 limitation(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.

- H. Where possible, the MLs employed for effluent analyses shall be lower than the permit limitations established for a given parameter. 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.

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 Part 136 (revised May 14, 1999);
 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 USEPA-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 limitation and that limitation will substitute for the ML for reporting and compliance determination purposes.
- I. Water/wastewater samples must be analyzed within allowable holding time limits as specified in section 136.3. All QA/QC items must be run on the same dates the samples were actually analyzed, and the results shall be reported in the Regional Water Board format, when it becomes available, and submitted with the laboratory reports
- J. 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.
- K. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments to insure accuracy of measurements, or shall insure that both equipment activities will be conducted.

- L. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. The annual monitoring report required in Section X.D shall also summarize the QA activities for the previous year. Duplicate chemical analyses must be conducted on a minimum of 10% of the samples, or at least one sample per sampling period, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples.
- M. When requested by the Regional Water Board or USEPA, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger must have a success rate equal to or greater than 80%.
- N. For parameters that both average monthly and daily maximum limitations 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 limitation, the Discharger shall collect four additional samples at approximately equal intervals during the month, until compliance with the average monthly limitation 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 limitation.
- O. In the event wastes are transported to a different disposal site during the report 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.
- P. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.

II. MONITORING LOCATIONS

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

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Shall be located at the entrance of the intake water
001	EFF-001	Shall be located at Discharge Point 001 at latitude 34° 08' 36" N and longitude 119° 13' 48" W.
--	RSW-001	Shall be located between 100 to 300 feet from the point of discharge of the effluent to the Port Hueneme Harbor. The monitoring point, located in the Harbor water, should not be influenced by the discharge.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

1. The Discharger shall monitor intake water influent to the facility at INF-001 as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency ¹	Required Analytical Test Method
Copper, Total Recoverable ²	µg/L	Grab	2/quarter	2
Zinc, Total Recoverable ²	µg/L	Grab	2/quarter	2

¹ Two influent samples shall be collected per quarter and should be representative of the intake water for the period sampled. 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.

² Pollutants shall be analyzed using the analytical methods described in Part 136; for priority pollutants the methods must meet the lowest MLs specified in Appendix 4 of the SIP, and included as Attachment G.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor aquaculture wastewater at Monitoring Location EFF-001 as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
<i>Conventional Pollutants</i>				
Biochemical Oxygen Demand 5-day @ 20°C (BOD)	mg/L	Grab	1/quarter	1
Fecal Coliform	MPN/100 ml	Grab	1/quarter	1
Oil and Grease	mg/L	Grab	1/quarter	1
PH	standard units	Grab	1/week	1
Total Suspended Solids (TSS)	mg/L	Grab	1/quarter	1
<i>Priority Pollutants</i>				
Copper, Total Recoverable	µg/L	Grab	1/ quarter	1
Zinc, Total Recoverable	µg/L	Grab	1/ quarter	1
Remaining Priority Pollutants ²	µg/L	Grab	1/ every five years	1
<i>Non-Conventional Pollutants/Parameters</i>				
Ammonia Nitrogen	µg/L	Grab	1/quarter	1
Acute Toxicity ³	% survival	Grab	1/year	1
Chronic Toxicity ³	µg/L	Grab	1/year	1
Dissolved Oxygen	mg/L	Grab	1/week	1
Flow, Total	Gallons/day	Meter ⁴	1/day	1
Residual chlorine	mg/L	Grab	1/year	1
Settleable Solids	ml/L	Grab	1/quarter	1
Nitrate Nitrogen	µg/L	Grab	1/quarter	1

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Nitrite Nitrogen	µg/L	Grab	1/quarter	1
Temperature	°F	Grab	1/week	1
Turbidity	NTU	Grab	1/quarter	1

¹ Pollutants shall be analyzed using the analytical methods described in Part 136; for priority pollutants the methods must meet the lowest MLs specified in Attachment 4 of the SIP and included as Attachment G. If no methods are specified for a given pollutant, use methods approved by this Regional Water Board or the State Water Board.

² Priority Pollutants as defined by the CTR defined in Finding II.I of this Order and included as Attachment H.

³ See Section V, below.

⁴ Flow shall be recorded using a flow meter. No estimation is allowed.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Definition of Toxicity

1. Acute Toxicity.

Acute toxicity is a measure of primarily lethal effects that occur over a 96-hour period. Acute toxicity shall be measured in percent survival measured in undiluted (100%) effluent.

- a. The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90% survival, and
- b. No single test shall produce less than 70% survival.

2. Chronic Toxicity.

Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Chronic toxicity shall be measured in TU_c , where $TU_c = 100/NOEC$. The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

- a. This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed, 1 TU_c in a critical life stage test.)

3. Accelerated Monitoring

If either of the above requirements is not met, the Discharger shall conduct six additional tests over a six-week period. The discharger shall ensure that they receive results of a failing toxicity test within 24 hours of the close of the test and the additional tests shall begin within 3 business days of the receipt of the result. If the additional tests indicate compliance with the toxicity limitation, the discharger may resume regular testing. However, if the results of any two of the six accelerated tests are less than the stipulated requirements, then the Discharger shall begin a Toxicity Identification Evaluation (TIE). The TIE shall include all reasonable steps to identify the sources of toxicity. Once the sources are identified, the Discharger shall take all reasonable steps to reduce toxicity to meet objective.

If the initial test and any of the additional six acute toxicity bioassay test result in less than 70% survival, including the initial test, the Discharger shall immediately begin a TIE.

B. Acute Toxicity Effluent Monitoring Program

1. The Discharger shall conduct acute toxicity tests on effluent grab samples by methods specified in Part 136 which cites USEPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, October 2002, USEPA, Office of Water, Washington D.C. (EPA/821-R-02-012) or a more recent edition to ensure compliance in 100 % effluent.
2. The fathead minnow, *Pimephales promelas*, shall be used as the test species for fresh water discharges and the topsmelt, *Atherinops affinis*, shall be used as the test species for brackish effluent. The method for topsmelt is found in USEPA's *Short-term Method for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, First Edition, August 1995 (EPA/600/R-95/136).
3. In lieu of conducting the standard acute toxicity testing with the fathead minnow, the Discharger may elect to report the results or endpoint from the first 48 hours of the chronic toxicity test as the results of the acute toxicity test.
4. Effluent samples shall be collected before discharge to the receiving water.

C. Chronic Toxicity Effluent Monitoring Program

1. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water.
2. Test Species and Methods:
 - a. The Discharger shall conduct critical life stage chronic toxicity tests on grab 100 % effluent samples in accordance with USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, October 2002 (EPA/21-R-02-013) or USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, Third Edition, October 2002, (EPA/821/R-02-014), or a more recent edition.
 - b. The Discharger shall conduct tests as follows: with a vertebrate, an invertebrate, and a plant for the first three suites of tests. After the screening period, monitoring shall be conducted using the most sensitive species.
 - c. Re-screening is required every 15 months. The Discharger shall re-screen with the three species listed above and continue to monitor with the most sensitive species. If the first suite of re-screening tests demonstrates that the same species is the most sensitive then re-screening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is ambiguity then the Discharger shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites.

- d. In brackish waters, the presence of chronic toxicity may be estimated as specified using West Coast marine organisms according to USEPA's *Short-Term Methods for Estimating Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms*, August 1995 (EPA/600/R-95/136), or a more recent edition.

D. Quality Assurance

1. Concurrent testing with a reference toxicant shall be conducted. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).
2. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the test methods manuals (EPA/600/4-91/002 and EPA/821-R-02-014), then the Discharger must re-sample and re-test at the earliest time possible.
3. Control and dilution water should be receiving water or laboratory water, as appropriate, as described in the manual. If the dilution water used is different from the culture water, a second control using culture water shall be used.

E. Accelerated Monitoring and Initial Investigation TRE Trigger

1. If toxicity exceeds the limitations (as defined in Section V.A., above,) then the Discharger shall immediately implement accelerated testing, as specified at Section V.A.3 above. The discharger shall ensure that they receive results of a failing toxicity test within 24 hours of the completion of the test and the additional tests shall begin within 3 business days of receipt of the results or at the first opportunity of discharge. If the accelerated testing shows consistent toxicity, the discharger shall immediately implement the Initial Investigation of the TRE Workplan.
2. If implementation of the initial investigation TRE workplan indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger may discontinue the TIE.
3. The first step in the initial Investigation TRE Workplan for downstream receiving water toxicity can be a toxicity test protocol designed to determine if the effluent causes or contributes to the measured downstream chronic toxicity. If this first step TRE testing shows that the outfall effluent does not cause or contribute to downstream chronic toxicity, using EPA's *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, October 2002 (EPA/821-R-02-013). Then a report on this testing shall be submitted to the Board and the TRE will be considered to be completed. Routine testing in accordance with MRP No. 6027 shall be continued thereafter.

F. Toxicity Reduction Evaluation (TRE)/ Toxicity Identification Evaluation (TIE) Trigger

1. If the accelerated testing shows consistent toxicity as defined below:
 - a. Acute Toxicity:
 - i. If the results of any two of the six accelerated tests are less than 90% survival, or

- ii. If the initial test and any of the additional six acute toxicity bioassay tests result in less than 70% survival.

b. Chronic Toxicity:

1. If the results of two of the six accelerated tests exceed 1.0 TU_c

then, the Discharger shall immediately implement the TRE as described below.

G. Steps in TRE and TIE Procedures

1. Following a TRE trigger, the Discharger shall initiate a TRE in accordance with the facility's Initial Investigation TRE workplan. At a minimum, the Discharger shall use USEPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance. The Discharger shall expeditiously develop a more detailed TRE workplan for submittal to the Executive Officer within 30 days of the trigger, which will include, but not be limited to:
 - a. Further actions to investigate and identify the cause of toxicity;
 - b. Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity;
 - c. Standards the Discharger will apply to consider the TRE complete and to return to normal sampling frequency; and,
 - d. A schedule for these actions.
2. The following is a stepwise approach in conducting the TRE and TIE:
 - a. Step 1 - Basic data collection. Data collected for the accelerated monitoring requirements may be used to conduct the TRE;
 - b. Step 2 - Evaluates optimization of the treatment system operation, facility housekeeping, and the selection and use of in-plant process chemicals;
 - c. Step 3 - If Steps 1 and 2 are unsuccessful, Step 3 implements a TIE by employing all reasonable efforts and using currently available TIE methodologies. The Discharger shall use the USEPA acute and chronic manuals, EPA/600/6-91/005F (Phase I), EPA/600/R-96-054 (for marine), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III) as guidance. The objective of the TIE is to identify the substance or combination of substances causing the observed toxicity;
 - d. Step 4 - Assuming successful identification or characterization of the toxicant(s), Step 4 evaluates final effluent treatment options;
 - e. Step 5 - Evaluates in-plant treatment options; and,
 - f. Step 6 - Consists of confirmation once a toxicity control method has been implemented.

Many recommended TRE elements parallel source control, pollution prevention, and storm water control program best management practices. To prevent duplication of efforts, evidence of implementation of these control measures may be sufficient to comply with TRE requirements. By requiring the first steps of a TRE to be accelerated testing and review of the facility's TRE workplan, a TRE may be ended in its early stages. All reasonable steps shall be taken to reduce toxicity to the required level. The TRE may be ended at any stage if monitoring indicates there is no longer toxicity (or six consecutive acute toxicity test results are greater than 90% survival and/or six consecutive chronic toxicity results are less than or equal to the 1.0 TUc).

3. The Discharger may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. The Discharger shall use the EPA acute and chronic manuals, EPA/600/6-91/005F (Phase I)/EPA/600/R-96-054 (for marine), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III) as guidance.
4. If a TRE/TIE is initiated prior to completion of the accelerated testing required in this permit, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer.
5. Toxicity tests conducted as part of a TRE/TIE may also be used for compliance, if appropriate.
6. The Board recognizes that toxicity may be episodic and identification of causes of and reduction of sources of toxicity may not be successful in all cases. Consideration of enforcement action by the Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

H. Reporting

1. The Discharger shall submit a full report of the toxicity test results, including any accelerated testing conducted during the month as required by this permit. Test results shall be reported as toxicity units (% survival for acute toxicity test results or TUc for chronic toxicity test results) with the self monitoring reports (SMR) for the month in which the test is conducted.
2. If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, then those results also shall be submitted with the DMR for the period in which the investigation occurred.
 - a. The full report shall be submitted on or before the end of the month in which the DMR is submitted.
 - b. The full report shall consist of (1) the results; (2) the dates of sample collection and initiation of each toxicity test; (3) the acute toxicity average limitation or chronic toxicity limitation or trigger and (4) printout of the ToxCalc or CETIS program results.
3. Test results for toxicity tests also shall be reported according to the appropriate manual chapter on Report Preparation and shall be attached to the DMR. Routine reporting shall include, at a minimum, as applicable, for each test:
 - a. Sample date(s);

- b. Test initiation date;
 - c. Test species;
 - d. End point values for each dilution (e.g., number of young, growth rate, percent survival);
 - e. NOEC value(s) in percent effluent;
 - f. IC₁₅, IC₂₅, IC₄₀ and IC₅₀ values in percent effluent;
 - g. TU_c values $\left(TU_c = \frac{100}{NOEC} \right)$;
 - h. Mean percent mortality (+standard deviation) after 96 hours in 100% effluent (if applicable);
 - i. NOEC and lowest observed effect concentration (LOEC) values for reference toxicant test(s);
 - j. IC₂₅ value for reference toxicant test(s);
 - k. Any applicable charts; and
 - l. Available water quality measurements for each test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, ammonia).
4. The Discharger shall provide a compliance summary, which includes a summary table of toxicity data from all samples collected during that year.

The Discharger shall notify by telephone or electronically, this Regional Water Board of any toxicity exceedance of the limitation or trigger within 24 hours of receipt of the results followed by a written report within 14 calendar days of receipt of the results. The verbal or electronic notification shall include the exceedance and the plan the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by the permit, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

Not Applicable

VII. RECLAMATION MONITORING REQUIREMENTS

Not Applicable

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Monitoring Location RSW-001

1. The Discharger shall monitor Port Hueneme Harbor at RSW-001 as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
<i>Conventional Pollutants</i>				
Ph	standard units	Subsurface grab	1/quarter	2
<i>Priority Pollutants</i>				

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Priority pollutants ³	µg/L	Subsurface grab	1/every five years ^{1,4}	2
<i>Non-Conventional Pollutants</i>				
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/quarter	2
Salinity ¹	g/Kg	Subsurface grab	1/quarter	2
Temperature	°F	Subsurface grab	1/quarter	2

¹ Receiving water pH, salinity, temperature must be analyzed at the same time the samples are collected for priority pollutants analysis.

² Pollutants shall be analyzed using the analytical methods described in Part 136; for priority pollutants the methods must meet the lowest MLs specified in Appendix 4 of the SIP and included as Attachment G. If no methods are specified for a given pollutant, use methods approved by this Regional Water Board or the State Water Board.

³ Priority Pollutants as defined by the CTR defined in Finding II.I of this Order and included as Attachment H.

⁴ Shall be monitored concurrently with effluent Priority Pollutant monitoring specified in Section IV.A.1 of Monitoring and Reporting Program, Attachment E.

B. Visual Monitoring of Receiving Water Sampling Point

1. A visual observation station shall be established in the vicinity of the discharge point of the outfall to the receiving water (Port Hueneme Harbor).
2. General observations of the receiving water shall be made at each discharge point when discharges occur. During months of no discharge, the receiving water observations shall be made on a monthly basis. All receiving water observations shall be reported in the quarterly monitoring report. If no discharge occurred during the observation period, this shall be reported. 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 visible turbidity or color patches
 - f. Direction of tidal flow
 - g. Description of odor, if any, of the receiving water
 - h. Presence and activity of California Least Tern and California Brown Pelican.

IX. OTHER MONITORING REQUIREMENTS

A. Best Management Practices Plan (BMPP)

As required under Special Provision VI.C.3 of this Order, the Discharger shall submit BMPP to the Executive Officer of the Regional Water Board for approval within 90 days of the effective date of this permit. The plan shall entail site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the United States. BMPs are schedules of activities, prohibitions of practices, cleaning and maintenance procedures, employee training, treatment methods,

etc. that are employed to control discharge of pollutants. 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 Plan should contain at least the following: statement of BMP policy, feeding procedures, cleaning and maintenance procedures, schedules of activities, prohibited practices, treatment methods, and employee training. The BMPP shall be consistent with the general guidance contained in the USEPA *Guidance Manual for Developing Best Management Practices (BMPs)* (EPA 833-B-93-004).

B. Chemical Use Report

1. The Discharger shall submit to the Regional Water Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect the waste discharge, including quantities of each.
2. The Discharger shall report annually summarizing the quantities of all chemicals, listed by both trade and chemical names, which are used at the facility and which are discharged or have the potential to be discharged.
3. The Discharger shall monitor the chemicals used in the facility. Prior to any change in the use of chemical at the facility the discharger must inform the Regional Water Board. No changes in the type or amount of chemicals added to the process water shall be made without the written approval of the Regional Water Board's Executive Officer. The discharger must submit a complete report of the change to the Regional Water Board before the proposed date of change.

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. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.
4. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements
5. The Discharger shall report the results of acute and chronic toxicity testing, TRE and TIE as required in Section V.F. of the MRP, Attachment E.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs. Until such notification is given, the Discharger shall submit SMRs in accordance with the requirements described below.
2. The Discharger shall submit quarterly and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. Quarterly reports shall be due on May 1, August 1, November 1, and February 1 following each calendar quarter and annual reports shall be due on February 1 following each calendar year.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	March 2, 2007	All	May 1 August 1 November 1 February 1
1 / week	March 4, 2007	Sunday through Saturday	May 1 August 1 November 1 February 1
1 / quarter	April 1, 2007	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
1 / year	March 4, 2007	January 1 through December 31	February 1

4. The Discharger shall report with each sample result the applicable ML and the current MDL, as determined by the procedure in Part 136.
5. 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.
6. 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.
7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the standard provisions (Attachment D), to the address listed below:

California Regional Water Quality Control Board
 Los Angeles Region
 320 W. 4th Street, Suite 200
 Los Angeles, CA 90013

C. Discharge Monitoring Reports (DMRs)

Not Applicable

D. Other Reports

1. Within 90 days of the effective date of this permit, the Discharger is required to submit the following to the Regional Water Board:
 - a. Initial Investigation TRE workplan
 - b. Best Management Practices Plan (BMPP)
2. By March 1 of each year, the Discharger shall submit an annual report to the Regional Water Board. The report shall contain the following:
 - a. Both tabular and graphical summaries of the monitoring data obtained during the previous year,
 - b. A discussion on the compliance record and the corrective actions taken or planned to bring the discharge into full compliance with the waste discharge requirements,
 - c. A report discussing the following: 1) operation/maintenance problems; 2) changes to the facility operations and activities; 3) potential discharge of the pollutants associated with the changes and how these changes are addressed in the BMPP; 3) calibration of flow meters or other equipment/device used to demonstrate compliance with effluent limitations of this Order.
 - d. A report summarizing the quantities of all chemicals, listed by both trade and chemical names, which are used at the facility and which are discharged or have the potential to be discharged (See Section IX.B of the MRP, Attachment E,)
 - e. A report on the status of the implementation and the effectiveness of the BMPP.
3. As discussed in Section VIII.E of the MRP, Attachment E, the Discharger shall submit to the Regional Water Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect this waste discharge, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly.

ATTACHMENT F – FACT SHEET

TABLE OF CONTENTS

Attachment F – Fact Sheet	F-3
I. Permit Information.....	F-3
II. Facility Description.....	F-4
A. Description of Facility and Wastewater and Treatment	F-4
B. Discharge Points and Receiving Waters	F-4
C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data	F-4
D. Compliance Summary	F-6
E. Planned Changes - Not applicable.....	F-7
III. Applicable Plans, Policies, and Regulations	F-7
A. Legal Authorities.....	F-7
B. California Environmental Quality Act (CEQA)	F-7
C. State and Federal Regulations, Policies, and Plans.....	F-7
D. Impaired Water Bodies on CWA 303(d) List	F-10
E. Other Plans, Polices and Regulations – Not Applicable	F-10
IV. Rationale For Effluent Limitations and Discharge Specifications	F-10
A. Discharge Prohibitions	F-11
B. Technology-Based Effluent Limitations	F-11
1. Scope and Authority	F-11
2. Applicable Technology-Based Effluent Limitations	F-12
1. Scope and Authority	F-13
2. Applicable Beneficial Uses and Water Quality Criteria and Objectives	F-13
3. Determining the Need for WQBELs.....	F-14
4. WQBEL Calculations.....	F-15
5. WQBEL Based on Basin Plan and Thermal Plan	F-21
6. Final WQBELs.....	F-22
7. Whole Effluent Toxicity (WET).....	F-24
D. Final Effluent Limitations.....	F-24
E. Interim Effluent Limitations.....	F-29
F. Land Discharge Specifications.....	F-29
G. Reclamation Specifications.....	F-29
V. Rationale for Receiving Water Limitations.....	F-29
A. Surface Water.....	F-29
B. Groundwater.....	F-29
VI. rationale for Monitoring and Reporting Requirements	F-29
A. Influent Monitoring	F-29
B. Effluent Monitoring.....	F-29
C. Whole Effluent Toxicity Testing Requirements.....	F-30
D. Receiving Water Monitoring.....	F-30
1. Surface Water	F-30
2. Groundwater	F-30
E. Other Monitoring Requirements	F-30
VII. Rationale for Provisions	F-30
A. Standard Provisions.....	F-30
1. Federal Standard Provisions	F-30
2. Regional Water Board Standard Provisions	F-31
B. Special Provisions	F-31

1. Reopener Provisions	F-31
2. Special Studies and Additional Monitoring Requirements.....	F-31
3. Best Management Practices and Pollution Prevention (BMPP)	F-31
4. Compliance Schedules.....	F-31
5. Construction, Operation, and Maintenance Specifications.....	F-31
6. Special Provisions for Municipal Facilities (POTWs Only)	F-31
7. Other Special Provisions	F-32
VIII. Public Participation	F-32
A. Notification of Interested Parties	F-32
B. Written Comments	F-32
C. Public Hearing	F-32
D. Nature of Hearing	F-33
E. Parties to the Hearing	F-33
F. Public Comments and Submittal of Evidence.....	F-33
G. Hearing Procedure.....	F-33
H. Waste Discharge Requirements Petitions.....	F-34
I. Information and Copying.....	F-34
J. Register of Interested Persons	F-34
K. Additional Information	F-34

ATTACHMENT F – FACT SHEET

As described in Section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	4A565022002
Discharger	Stellar Biotechnologies, Inc.
Name of Facility	Stellar Biotechnologies, Inc.
Facility Address	Hueneme Aquaculture Park #452, Lighthouse Circle
	Port Hueneme, CA
	Ventura County
Facility Contact, Title and Phone	Frank Oakes, Facility Manager, (805) 488-2147 ext. 106
Authorized Person to Sign and Submit Reports	Frank Oakes, Facility Manager, (805) 488-2147 ext 106
Mailing Address	417 East Hueneme Road, #170 Port Hueneme, CA 93041
Billing Address	417 East Hueneme Road, #170 Port Hueneme, CA 93041
Type of Facility	AGR
Major or Minor Facility	Major
Threat to Water Quality	3
Complexity	C
Pretreatment Program	N/A
Reclamation Requirements	N
Facility Permitted Flow	4.32 MGD
Facility Design Flow	Not Applicable
Watershed	Ventura County Coastal Watershed
Receiving Water	Port Hueneme Harbor
Receiving Water Type	Harbor

- A. Stellar Biotechnologies, Inc. (hereinafter Discharger) is the owner and operator of Stellar Biotechnologies, Inc. Facility (hereinafter Facility), an aquaculture facility.
- B. The Facility discharges wastewater to Port Hueneme Harbor, a water of the United States and is currently regulated by Order No. 01-075 which was adopted on May 24, 2001 and expires on April 10, 2006.
- C. The Discharger filed a report of waste discharge and submitted an application for renewal of its WDRs and NPDES permit on November 10, 2005. A site visit was conducted on November 9, 2005, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

The Discharger owns and operates the marine Facility located in the southwest jetty of Port Hueneme Harbor in the City of Hueneme. The Facility is a marine aquaculture nursery and hatchery that husband and propagates various native marine organisms, which include, but is not limited to: limpets, abalone, various fishes, crustaceans, other mollusks, other invertebrates and various marine algae. The Facility supplies marine derived products to the pharmaceutical industry for research and for use in the development of various cancer vaccines.

A. Description of Facility and Wastewater and Treatment

The Facility obtains its intake water from the harbor entrance through a 6-inch pipe extending approximately 70 feet from shore at the south bank of the Port Hueneme Harbor entrance. Intake water is pumped to a series of tanks that house the marine organisms. As the water passes through the tanks, the marine organisms may contribute small amounts of waste. No chemicals are added to the water during any part of the operation. The wastewater is not re-circulated but is allowed to flow through to discharge through Discharge Point 001 located close to the mouth of Port Hueneme Harbor, a water of the United States within Ventura County Coastal Watershed. The process generates an average of 0.35 million gallons per day (MGD) of aquaculture wastewater. Currently, the Facility discharges up to 0.72 MGD of aquaculture wastewater, but it has a flow capacity of 4.32 MGD of wastewater.

B. Discharge Points and Receiving Waters

The Facility may discharge up to 4.32 MGD of aquaculture wastewater through Discharge Point 001, located at 34° 08' 36" N and 119° 13' 48" W, to the Port Hueneme Harbor, a water of the United States.

The intake water is from the same water body as the receiving water. There is one intake pipe, which is approximately 300 feet away from Discharge Point 001 (Outfall) and approximately 150 feet from the receiving water monitoring location (RSW-001) and about 2 feet from the bottom of the Harbor. The intake pipe is made of 6-inch diameter polyvinyl chloride (PVC) and is 70 feet in length. The pipe is screened and is connected to a pump to draw water from the harbor.

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

As required by the existing Order No. 01-075, the Discharger submitted quarterly monitoring reports for the effluent flow and inorganic pollutants and annual monitoring reports for metals for the entire term of the permit. However, the Discharger did not report pollutant mass loadings in the effluent. Effluent limitations/discharge Specifications contained in the existing Order for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data for the effluent from the term of the existing Order are presented in Table F-2.

Table F-2. Summary of Effluent Limitations in Order No. 01-075 and SMR Reporting For Discharge Point 001

Parameter ¹	Units	Effluent Limitation		Monitoring Data for Discharge Point 001 (July 2001 to December 2005)
		30-Day Average	Maximum Daily	Highest Daily Discharge
<i>Conventional Pollutants</i>				
Biochemical Oxygen Demand 5-day @ 20 °C (BOD)	mg/L	20	30	3.12
	lbs/day	720	1080	NR ²
Oil and Grease	mg/L	10	15	ND ²
	lbs/day	360	540	---
pH	standard units	---	6.5 - 8.5 ³	7.49 - 8.82
Total Suspended Solids (TSS)	mg/L	50	75	110
	lbs/day	1,700 North	2,700	NR ²
Fecal Coliform	MPN/100 ml	200 ⁴	400 ⁴	110
<i>Priority Pollutants</i>				
Copper	µg/L	2.88	5.78	20
	lbs/day	0.10	0.21	NR ²
Mercury	µg/L	---	---	0.02
	lbs/day	---	---	NR ²
Zinc	µg/L	47.3	94.9	110
	lbs/day	1.70	3.42	NR ²
<i>Non-Conventional Pollutants</i>				
Ammonia	mg/L	⁵		0.60
Dissolved Oxygen	mg/L	⁶		10.39 ⁷
Flow, Total	MGD	---	4.32	0.72
Nitrate-Nitrogen	mg/L	---	---	0.70
Nitrogen, Organic	mg/L	---	---	0.90
Nitrogen, Kjeldahl	mg/L	---	---	1.2
Settleable Solids	ml/L	---	---	0.7
Temperature	°C	⁸		18.5
Total Coliform	MPN/100 ml	---	---	240
Turbidity	NTU	50	150	5.6

¹ Other pollutants analyzed were reported as not detected

² NR= Not reported; ND = Not detected

³ pH should be between 6.5 and 8.5

⁴ A log mean fecal coliform concentration of 200 MPN/100 ml (based on a minimum of not less than four samples for any 30-day period), and a value of 400 MPN/100 ml for more than 10 percent of the total samples during any 30-day period

⁵ Ammonia concentrations listed in the tables 1 through 4 in existing Order No. 01-075

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 Minimum single dissolved oxygen concentration reported

⁸ A discharge temperature of no more than 20 °F higher than the receiving water temperature and a maximum increase of 4 °F in the natural receiving water temperature as a result of waste discharge.

In accordance with the requirements in existing Order No. 01-075, the Discharger is also required to monitor metals in the influent annually. The Discharger reported quarterly monitoring data for total and fecal coliform for the influent.

D. Compliance Summary

Effluent data submitted by the Discharger to the Regional Water Board for Discharge Point 001 indicate that the Discharger has exceeded existing permit limitations as outlined in the table below:

Table F-3. Compliance Summary For Discharge Point 001

Date	Monitoring Period	Violation Type	Pollutant ¹	Reported Value	Permit Limitation	Units
June 2008	2 nd Quarter 2008	Average & Maximum	Copper	40	2.88 & 5.78	µg/L
March 2008	1 st Quarter 2008	Average & Maximum	Copper	110	2.88 & 5.78	µg/L
March 2008	1 st Quarter 2008	Average & Maximum	Copper	0.24 ²	0.1 & 0.21	lbs/day
Dec 2007	4 th Quarter 2007	Average & Maximum	Copper	119	2.88 & 5.78	µg/L
Sept 2007	3 rd Quarter 2007	Average & Maximum	Copper	278	2.88 & 5.78	µg/L
June 2007	2 nd Quarter 2007	Average & Maximum	Copper	99	2.88 & 5.78	µg/L
Oct 2006	4 th Quarter, 2006	Maximum	pH	9.45	8.5	s.u.
Sept 2006	3 rd Quarter, 2006	Average	TSS	70	50	mg/L
Dec 2005	4 th Quarter, 2005	Average & Maximum	Copper	20	2.88 & 5.78	µg/L
June 2003	2 nd Quarter, 2003	Average & Maximum	TSS	100	50 & 75	mg/L
March 2003	1 st Quarter, 2003	Average & Maximum	TSS	80	50 & 75	mg/L
Dec 2002	4 th Quarter, 2002	Average & Maximum	TSS	110	50 & 75	mg/L
Dec 2002	4 th Quarter, 2002	Average & Maximum	Zinc	110	47.3 & 94.9	µg/L
June 2002	2 nd Quarter, 2002	Maximum	pH	8.51	8.5	s.u.
March 2002	1 st Quarter, 2002	Maximum	pH	8.55	8.5	s.u.
Dec 2001	4 th Quarter, 2001	Average	Zinc	50	47.3	µg/L
---	Entire Permit Term	Reporting Annual Mean	Dissolved Oxygen	---	7.0	mg/L
---	Entire Permit Term	Reporting Mass Discharge (Average & Maximum)	BOD	---	720 & 1,080	lbs/d
			TSS	---	1,700 North & 2,700	lbs/d
			Copper	---	0.10 & 0.21	lbs/d
			Zinc	---	1.70 & 3.42	lbs/d
---	Entire Permit Term	Annual Report	All	---	---	---

¹ TSS = total suspended solids

² Based on the daily flow of 0.2592 MGD

E. Planned Changes - Not applicable

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order is issued pursuant to section 402 of the CWA and implementing regulations adopted by the USEPA and Chapter 5.5, Division 7 of the CWC. It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as WDRs pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.

B. California Environmental Quality Act (CEQA)

This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC.

C. State and Federal Regulations, Policies, and Plans

1. Water Quality Control Plans. The Regional Water Board adopted a Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (hereinafter 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 plan. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Beneficial uses applicable to Port Hueneme Harbor are as follows:

Table F-4. Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Port Hueneme Harbor	<p><u>Existing:</u> Industrial Process Supply (PROC), navigation (NAV), contact water recreation (REC-1), and non-contact water recreation (REC-2), commercial and sport fishing (COMM), marine habitat (MAR), and wildlife habitat (WILD), shellfish harvesting (SHELL) and rare, threatened or endangered species (RARE).</p> <p><u>Potential:</u> Spawning, reproduction, and/or early development (SPWN)</p>

Ammonia Basin Plan Amendment. The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through 3-4. However, those ammonia objectives were revised on March 4, 2004, by the Regional Water Board with the adoption

of Resolution No. 2004-022, Amendment to the *Water Quality 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"*. The ammonia Basin Plan amendment was approved by the Office of Administrative Law on September 15, 2004 and by USEPA on May 19, 2005. The amendment revised the Basin Plan by updating the ammonia objectives for inland surface waters not characteristic of freshwater such that they are consistent with the USEPA "*Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989*." The amendment revised the regulatory provisions of the Basin Plan by adding language to Chapter 3, "Water Quality Objectives."

The amendment contains objectives for a 4-day average concentration of un-ionized ammonia of 0.035 mg/L, and a 1-hour average concentration of un-ionized ammonia of 0.233 mg/L. The objectives are fixed concentrations of un-ionized ammonia, independent of pH, temperature, or salinity. The amendment also contains an implementation procedure to convert un-ionized ammonia objectives to total ammonia effluent limitations. The implementation plan as outlined is to be used to determine the appropriate effluent limit for Total Ammonia.

- 2. Thermal Plan.** The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.

Subsequently, a white paper was developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. A survey was completed for several kinds of fish and the 86 °F temperature was found to be protective. The new temperature effluent limitation was developed that is reflective of new information available that indicates that the 100 °F temperature is not protective of aquatic organisms, but that 86°F is protective.

- 3. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA 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, USEPA 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 water quality criteria for priority pollutants.
- 4. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA 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 USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation

provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

5. **Antidegradation Policy.** Section 131.12 requires that 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, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings. As discussed in detail in this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution 68-16.
6. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.
7. **Monitoring and Reporting Requirements.** 40 CFR Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The MRP establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.
8. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (40 C.F.R. § 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.
9. **Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (BOD), oil and grease, total suspended solids (TSS), and turbidity. Restrictions on biochemical oxygen demand (BOD), oil and grease, total suspended solids (TSS), and turbidity are specified in federal regulations as discussed in section IV.B in the Fact Sheet, and the permit's technology-based pollutant restrictions are no more stringent than required by the CWA. Water quality-based effluent limitations (WQBELs) have been scientifically 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 CFR section 131.38. The scientific procedures for calculating the individual WQBELs are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial

uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

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

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

USEPA approved the State's 2002 303(d) list of impaired water bodies on July 25, 2003. 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 2002 303(d) list and have been scheduled for TMDL development.

The 2002 State Water Board's California 303(d) List classifies the Port Hueneme Harbor as impaired. The pollutants of concern include DDT (tissue) and PCB (tissue). The discharge is not expected to contribute either pollutant to the receiving water. To date, no TMDL has been completed for this segment of water. Therefore, no conditions in the Order are based on TMDLs.

E. Other Plans, Policies and Regulations – Not Applicable

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations; and other requirements in NPDES permits. There are two principal bases for effluent limitations: section 122.44(a) requires that permits include applicable technology-based limitations and standards; and section 122.44(d) requires that permits include WQBELs to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established. Three options exist to protect water quality: 1) section 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a); 2) proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information may be used; or 3) an indicator parameter may be established.

The Facility is an aquaculture facility that houses marine organisms. The Facility operations generate wastes that typically include unused food and fish excrement. Typical pollutants present in these waste streams may include oil and grease, solids, organics, and metals. Solids are commonly present in aquaculture facilities and therefore, total suspended solids (TSS) and turbidity are pollutants of concern. Organics are usually determined in wastewater by measuring the 5-day biochemical oxygen demand @ 20°C (BOD). In addition, unused food and fish excrement may contribute to nitrogen and fecal coliforms in the waste stream, and therefore,

ammonia and fecal coliforms 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 affect the pH, temperature, and dissolved oxygen of the receiving water body. When the existing permit was issued in 2001, oil and grease, TSS, turbidity, BOD, ammonia-nitrogen, fecal coliform, copper, zinc, pH, temperature, and dissolved oxygen were considered pollutants of concern and were regulated in the existing permit. The Facility operation has not changed significantly since the existing permit was issued. Therefore, these pollutants are also considered pollutants of concern for the permit. The Regional Water Board has determined that regulating copper and zinc will control other metals from the discharge.

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. 40 CFR Section 122.45(f)(1) requires that all permit limitations, standards or prohibitions be expressed in terms of mass units except under the following conditions:

- a. for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations;
- b. when applicable standards or limitations are expressed in terms of other units of measure; or
- c. if in establishing technology-based permit limitations 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. The limitations, however, must ensure that dilution will not be used as a substitute for treatment.

The Report of Waste Discharge indicates that the maximum discharge rate of wastewater to Port Hueneme Harbor through Discharge Point 001 is 0.72 mgd much less than the design flow rate. The proposed mass-based limitations for Discharge Point 001 are based on a flow of 4.32 MGD the design flow rate. If the actual flow rate during the sampling event is less than the design flow rate, the actual flow rate is to be used to calculate the mass-based limitations.

A. Discharge Prohibitions

The discharge prohibitions are based on the requirements of the Basin Plan, State Water Board's plans and policies, CWC, and existing permit provisions, and are consistent with the requirements set for other discharges regulated by NPDES permits to the Port Hueneme Harbor.

B. Technology-Based Effluent Limitations

1. Scope and Authority

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

- a. Best practicable treatment control technology (BPT) is based on the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and nonconventional 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 nonconventional pollutants.
- c. Best conventional pollutant control technology (BCT) is a standard for the control from existing industrial point sources of conventional pollutants including BOD, TSS, oil and grease, fecal coliform, and pH. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.
- d. New source performance standards (NSPS) that 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 USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and section 125.3 of the NPDES regulations 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 permit writer must consider specific factors outlined in section 125.3.

2. Applicable Technology-Based Effluent Limitations

The ELG for the Concentrated Aquatic Animal Production (CAAP) Point Source Category, published by USEPA, became effective on September 22, 2004. These regulations, available in Part 451, are applicable to CAAP facilities defined in 40 CFR section 122.24. Based on the type operation and production, the Facility is not categorized as a CAAP facility. Therefore, the CAAP ELGs available in Part 451 are not applicable to the Facility.

The Order includes technology-based effluent limitations based on BPJ in accordance with 40 CFR section 125.3. As discussed earlier, oil and grease, TSS, turbidity, BOD, and ammonia-nitrogen are pollutants of concern for this type of discharge and existing permit includes effluent limitations for these pollutants. 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 Orders. Removal of these numeric limitations would constitute backsliding under CWA Section 402(o). The Regional Water Board has determined that these numeric effluent limitations continue to be applicable to the Facility and that backsliding is not appropriate. Therefore, based on BPJ, effluent concentration limitations for all of the above pollutants for Discharge Point 001 in the Order are carried over from the existing Order (Order No. 01-075). However, the daily maximum effluent limitations for turbidity in the Order have been revised to 75 NTU in order to be consistent with similar permits recently issued by the Regional Water Board. A summary of the technology-based effluent limitations is described in Table F-5.

Table F-5. Summary of Technology-based Effluent Limitations Discharge Point 001

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅ 20°C)	MG/L	20	30
Oil and Grease	MG/L	10	15
Total Suspended Solids (TSS)	MG/L	50	75
Turbidity	NTU	50	75

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

As specified in 40 CFR section 122.44(d)(1)(i), permits are required to include WQBELs for toxic pollutants (including toxicity) that are or may be discharged at levels which cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or water quality criteria contained in the CTR and NTR. The specific procedures for determining reasonable potential and, if necessary, for calculating WQBELs are contained in the SIP for priority pollutants (listed in NTR, CTR, and Basin Plan) for non-storm water discharges. Hence, in the Order, the Regional Water Board has used the SIP methodology to evaluate reasonable potential for priority pollutants for discharge through Discharge Point 001.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The receiving water is the Port Hueneme Harbor. The beneficial uses applicable to the Port Hueneme Harbor are summarized in Section III.C.1 of this Fact Sheet.

Priority pollutant water quality criteria in the CTR are applicable to the Port Hueneme Harbor. The CTR contains aquatic saltwater criteria, aquatic freshwater criteria, and human health criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, the following apply in accordance to section 131.38(c)(3):

- a. the freshwater criteria apply at receiving water salinities of 1 part per thousand (ppt) and below at locations where this occurs 95% or more of the time;
- b. the saltwater criteria apply at receiving water salinities of 10 ppt and above at locations where this occurs 95% more of the time; and
- c. at receiving water salinities between 1 and 10 ppt the more stringent of the two apply.

The salinity of the receiving water is high because it is located within a coastal waterway. Human health criteria for consumption of organisms are applicable to all discharges, while

human health criteria for consumption water and organisms are only applicable to discharges that discharge to a receiving water with existing municipal and domestic (MUN) beneficial use. Therefore, based on the salinity and the designated beneficial use, the CTR criteria for the protection of aquatic saltwater organisms or human health for consumption of organisms only, whichever is more stringent, apply to discharges to the Port Hueneme Harbor.

3. Determining the Need for WQBELs

In accordance with Section 1.3 of the SIP, the Regional Water Board conducts an RPA for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. 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 a RPA:

- a. Trigger 1 – If the $MEC \geq C$, a limitation is needed.
- b. Trigger 2 – If $B > C$ and the pollutant is detected in the effluent, a limitation is needed.
- c. Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates 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 Discharger submitted annual effluent monitoring reports for arsenic, cadmium, chromium (VI), copper, lead, mercury, nickel, silver, zinc, and selenium for the entire term of the existing Order No. 01-075. There were five effluent data points for arsenic, cadmium, chromium (VI), copper, lead, mercury, nickel, silver, and zinc and two data points, reported as non-detects, for selenium. The Regional Water Board requires a minimum of 4 data points to run the RPA. The Discharger did not submit data for other CTR pollutants. The RPA was performed for the priority pollutants regulated in the CTR for which data were available. Based on the RPA, there is reasonable potential to exceed water quality standards for copper and zinc for discharges through Discharge Point 001. Refer to Attachment I for a summary of the RPA and associated effluent limitation calculations.

The following table summarizes the applicable water quality criteria/objective for priority pollutants reported in detectable concentrations in the effluent or showed reasonable

potential for Discharge Point 001. These criteria were used in conducting the RPA for the Order.

Table F-6. Applicable Water Quality Criteria

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria						
			Freshwater		Saltwater		Human Health for Consumption of:		
			Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms only	
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
2	Arsenic	36	Not Applicable			69	36	---	---
6	Copper	3.7				5.8	3.7	---	---
8	Mercury	0.051				Reserved	Reserved	---	0.051
13	Zinc	86				95	86	---	---

The RPA was performed for the priority pollutants for which effluent data were available for Discharge Point 001. Based on the RPA, copper and zinc demonstrated reasonable potential to cause or contribute to an excursion above a water quality standard. Copper was not detected in the effluent but the reported detection limit was greater than the CTR criteria. As discussed in Section IV of this Fact Sheet, copper is considered a pollutant of concern for this Facility and is regulated in the existing permit. As a result, the Regional Water Board determined that copper has a reasonable potential to cause or contribute to an excursion above a water quality standard and should be regulated in the permit. Results of the RPA for priority pollutants reported in detectable concentrations in the effluent or showed reasonable potential for Discharge Point 001 are summarized in the following table.

Table F-7. Summary Reasonable Potential Analysis

CTR No.	Constituent	Applicable Water Quality Criteria (C)	Maximum Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limitation ?	Reason
		µg/L	µg/L	µg/L		
6	Copper	3.7	20	---	Yes	MEC>C
8	Mercury	0.051	0.02	---	No	MEC<C & No B
13	Zinc	86	127	---	Yes	MEC>C

4. WQBEL Calculations

- a. If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one or more of the procedures contained in Section 1.4 of the SIP. These procedures include:
 - i. If applicable and available, use of the WLA established as part of a TMDL.
 - ii. Use of a steady-state model to derive MDELs and AMELs.
 - iii. Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Regional Water Board.

- iv. Establish effluent limitations that consider intake water pollutant concentrations, in accordance with Section 1.4.4.
- b. WQBELs for copper and zinc for the discharge through Discharge Point 001 for the discharge are based on the monitoring results and following the procedure based on the steady-state model, available in Section 1.4 of the SIP.
- c. In this Order, no dilution credit is being assigned. In accordance with the reopener provision in Limitations and Discharge Requirements, Special Provision VI.C.1.e in the Order, the permit 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

For each pollutant exhibiting reasonable potential, a set of AMEL and MDEL values are calculated separately, one set for the protection of aquatic life and the other for the protection of human health. The AMEL and MDEL limitations for aquatic life and human health are compared, and the most restrictive AMEL and MDEL are selected as the WQBEL. Using zinc as an example, the following demonstrates how the AMEL and MDELs were established in the permit. The tables in Attachment I summarize the development and calculation of all WQBELs for the permit using the process described below.

The following demonstrates how WQBELs were established for zinc for discharge through Discharge Point 001 in the Order. The process for developing these limitations is in accordance with Section 1.4 of the SIP. Table F-9 summarizes final WQBELs for Discharge Point 001 for the Order using the process described below.

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

$$\begin{aligned} \text{ECA} &= C + D(C-B) && \text{when } C > B, \text{ and} \\ \text{ECA} &= C && \text{when } C \leq B, \end{aligned}$$

- Where
- C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators.
 - D = The dilution credit, and
 - B = The ambient background concentration

As discussed in Section IV.C.2 of this Fact Sheet, based on the salinity and the designated beneficial use, the CTR criteria for the protection of aquatic saltwater organisms or human health for consumption of organisms only, whichever is more stringent, apply to discharges to the Port Hueneme Harbor.

For zinc, the most stringent water quality criteria are the saltwater criteria shown below:

$$\begin{aligned} \text{Saltwater acute criteria, } C_{\text{acute}} &= 95 \text{ } \mu\text{g/L} \\ \text{Saltwater chronic criteria, } C_{\text{chronic}} &= 86 \text{ } \mu\text{g/L} \end{aligned}$$

In the Order, dilution was not allowed; therefore:

$$ECA = C$$

Therefore,

$$\begin{aligned} ECA_{acute} &= 95 \mu\text{g/L} \\ ECA_{chronic} &= 86 \mu\text{g/L} \end{aligned}$$

No numeric human health criteria exist for zinc. Therefore, none of the limitations of zinc are based on human health.

$$ECA_{\text{human health}} = \text{Not applicable}$$

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

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

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

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.

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

<u>No. of effluent samples</u>	<u>CV</u>	<u>Multiplier_{acute}</u>	<u>Multiplier_{chronic}</u>
4	0.6	0.32	0.53

$$LTA_{acute} = 95 \mu\text{g/L} \times 0.32 = 31 \mu\text{g/L}$$

$$LTA_{chronic} = 86 \mu\text{g/L} \times 0.53 = 45 \mu\text{g/L}$$

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

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

For zinc, the most limiting LTA is the $LTA_{chronic}$

$$LTA = 31 \mu\text{g/L}$$

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). Water quality-based effluent limits 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. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 5 of the SIP and will not be repeated here.

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

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

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

For zinc, the following data was used to develop the AMEL and MDEL for aquatic life using equations provided in Section 1.4, Step 5 of the SIP (Table 2 of the SIP also provides these data up to two decimals):

<u>No. of samples per month</u>	<u>CV</u>	<u>Multiplier_{AMEL}</u>	<u>Multiplier_{MDEL}</u>
<4	0.6	1.55	3.11

$$AMEL_{\text{aquatic life}} = 31 \times 1.55 = 47 \mu\text{g/L}$$

$$MDEL_{\text{aquatic life}} = 31 \times 3.11 = 95 \mu\text{g/L}$$

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

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

No numeric human health criteria exist for zinc. Therefore, none of the limitations of zinc are based on human health.

$$AMEL_{\text{human health}} = \text{Not applicable.}$$

Step 6: Calculate the MDEL for human health by multiplying the AMEL by the ratio of the Multiplier_{MDEL} to the Multiplier_{AMEL} (AMEL multiplier based a 95th percentile occurrence probability). Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

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

No numeric human health criteria exist for zinc. Therefore, none of the limitations of zinc are based on human health.

$$MDEL_{\text{human health}} = \text{Not applicable.}$$

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

No human health criteria exist for zinc. The lowest (most restrictive) effluent limitations for zinc are based on aquatic saltwater criteria and are incorporated into the Order. These limitations will be protective of aquatic life.

For zinc:

<u>Constituent</u>	<u>AMEL_{aquatic life}</u>	<u>MDEL_{aquatic life}</u>
Zinc	47 µg/L	95 µg/L

e. Effluent Limitations for Copper Based on Intake Water Credits:

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 the following conditions are met:

- (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 that 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 USEPA;
- (3) The intake water is from the same water body 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 manner 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.

Based on the monitoring data submitted since January 2007 and additional information, the Discharger satisfies the conditions specified in Section 1.4.4 of the SIP. The observed maximum ambient background (receiving water) concentration and intake water concentration for copper (202 µg/L) exceeds the most stringent applicable (CTR) criteria for copper which is 2.9 µg/L. There is no TMDL for copper for the Port Hueneme Harbor nor is Port Hueneme Harbor listed for copper on the 2006 CWA 303(d) list of water quality limited segments. The intake water is from the same water body as the receiving water and the Discharger does not use or introduce metals in any of its aquaculture processes.

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.

Since, the receiving water (intake water) concentration for copper ranges from non-detect at 10 µg/L to 202 µg/L; setting the effluent limitation for copper as the reported maximum receiving water concentration is not the best method of implementing intake water credits. Therefore, if the influent water copper concentration does not exceed the average monthly limitation of 2.9 µg/L then the limitations are applied as noted in Table F-9 Summary of Final Effluent Limitations Discharge Point 001. If the influent water copper concentration exceeds the average monthly limitation of 2.9 µg/L but does not exceed the maximum daily limitation of 5.8 µg/L 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 F-9. If the influent water copper concentration exceeds the maximum daily limitation of 5.8 µg/L then compliance with both the average monthly and the maximum daily will be determined based on intake water credits.

When applying intake water credit, the copper effluent limitation is equal to the maximum copper concentration in the influent water, which is the same as the intake water. The equation is as follows:

$$\text{Cu Effluent Limitation with Intake Water Credit} = \text{Maximum Cu Influent Water Concentration}$$

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:

$$\text{If Cu Effluent Concentration} > \text{Maximum Cu Influent Water Concentration then violation}$$

If Cu Effluent Concentration \leq Maximum Cu Influent Water Concentration then in compliance.

f. Effluent Limitations for Zinc Based on Intake Water Credits:

Based on the monitoring data submitted since January 2007, the Discharger does not satisfy the conditions specified in Section 1.4.4 of the SIP for intake credits for zinc. The observed maximum ambient background (receiving water) concentration and intake water concentration for zinc (40 $\mu\text{g/L}$) does not exceed the most stringent applicable (CTR) criteria for zinc which is 47 $\mu\text{g/L}$. The permit may be reopened to establish intake water credits if the Discharger demonstrates to the satisfaction of the Regional Water Board that zinc meets the conditions as outlined in Section 1.4.4 of the SIP.

5. WQBEL Based on Basin Plan and Thermal Plan

The Basin Plan states that the discharge shall not cause the following in Port Hueneme Harbor in Ventura County Coastal Watershed:

- a. A log mean fecal coliform concentration of 200 MPN/100 ml (based on a minimum of not less than four samples for any 30-day period), and a value of 400 MPN/100ml for more than 10 percent of the total samples during any 30-day period.
- b. The normal ambient pH to fall below 6.5 nor exceed 8.5 units.
- c. Exceed total ammonia (as N) concentrations specified in the Regional Water Board Basin Plan (1994), as amended by Resolution No. 2004-022, Amendment to the *Water Quality 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"*.
- d. Depress the concentration of dissolved oxygen to fall below 5.0 mg/L anytime nor shall allow the mean annual concentration of dissolved oxygen to fall below 7 mg/L.

To meet the water quality objectives in the Basin Plan and to protect the beneficial uses of the receiving water, the above requirements are included as effluent limitations in the Order.

The Basin Plan lists temperature requirements for the receiving waters and references the Thermal Plan. Based on the requirements 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 proposed permit. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. The new temperature effluent limitation is reflective of new information available that indicates that the 100 °F temperature is not protective of aquatic organisms. A survey was completed for several kinds of fish and the 86 °F temperature was found to be protective.

6. Final WQBELs

Summary of the WQBELs required by this Order are described in Table F-8 below.

Table F-8. Summary of WQBELs – Discharge Point 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	---	---	6.5	8.5
Copper, Total Recoverable	µg/L	1.9	5.8	---	---
Zinc, Total Recoverable	µg/L	47	95	---	---
Temperature	°F	---	86	---	---

- a. A log mean fecal coliform concentration of 200 MPN/100 ml (based on a minimum of not less than four samples for any 30-day period), and a value of 400 MPN/100ml for more than 10 percent of the total samples during any 30-day period.
- b. A mean annual dissolved oxygen concentration of at least 7 mg/L, with no single determination of less than 5.0 mg/L
- c. Exceed total ammonia (as N) concentrations specified in the Regional Water Board Basin Plan (1994), as amended by Resolution No. 2004-022, Amendment to the Water Quality 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".

7. 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 or 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 measures 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 response on aquatic organisms. Detrimental response includes but is 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. The Order includes acute toxicity limitations and monitoring requirements in accordance with the Basin Plan, in which 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. If the acute toxicity effluent limitations are exceeded, the Discharger is required to immediately implement accelerated monitoring frequency in accordance with Section V.E of MRP, Attachment E. Both the acute and chronic toxicity effluent limitations are receiving water criteria. However, the permit provides the Discharger the option of testing the effluent to meet the stipulated requirement.

In addition to the Basin Plan requirements, Section 4 of the SIP 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. Therefore, in accordance with the SIP, this Order requires the Discharger to conduct chronic toxicity testing on the effluent discharged through Discharge Point 001. In addition, the Order includes a chronic testing trigger hereby defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed 1.0 TU_c in a critical life stage test.) If the chronic toxicity of the effluent exceeds 1.0 TU_c, the Discharger will be required to immediately implement accelerated chronic toxicity testing according to Section V.E of MRP, Attachment E.

D. Final Effluent Limitations

Final effluent limitations for Discharge Point 001 are summarized in Table F-9. For each pollutant, the selected final effluent concentration limitation is the more stringent of the technology-based effluent limitation, available in Table F-5 and the WQBELs available in Table F-8. Toxicity requirements are based on the discussion in Section IV.C.7 of this Fact Sheet.

Mass-based effluent limitations in the permit are established for BOD, oil and grease, TSS, copper, and zinc. The mass-based effluent limitations are obtained from the flow and the effluent concentration limitation. The Report of Waste Discharge indicates that the maximum discharge rate of wastewater to Port Hueneme Harbor through Discharge Point 001 is 4.32 mgd. Therefore, the proposed mass-based limitations for Discharge Point 001 are based on a flow of 4.32 MGD. The 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 limitation for a pollutant (mg/L)

Flow rate = discharge flow rate (MGD)

Section 402(o) of the CWA and 40 section CFR 122.44(l) require that effluent limitations or conditions in reissued Orders be at least as stringent as those in the existing Orders except in cases where new information available justifies establishment of less-stringent effluent limitations. Removal of numeric limitations in the permit for pollutants regulated in the existing permit would constitute backsliding under CWA Section 402(o).

The effluent concentration limitations of BOD, oil and grease, TSS, and copper are the same as those in the existing permit. The concentration limitations of zinc are essentially the same (95 µg/L in this order and 94.9 µg/L in Order 01-075).

The effluent limitations for fecal coliform, pH, and dissolved oxygen are the same as those in the existing permit. The effluent limitations for turbidity in the Order have been revised in order to be consistent with similar permits recently issued by the Regional Water Board. The effluent limitation for temperature is revised in the permit based on the Thermal Plan and technical white paper developed at the Regional Board which demonstrated that the discharge temperature of 100°F is not protective of aquatic life and that 86°F is the more protective discharge temperature limitation. Toxicity requirements are also included in the permit.

The existing Order, section I.B.4, contains effluent limitations for ammonia that appear to be based on the Basin Plan. The 1994 Basin Plan contained water quality objectives for ammonia, in Tables 3-1 through 3-4. However, those ammonia objectives were revised on March 4, 2004, by the Regional Water Board, with the adoption of Resolution No. 2004-022. The amendment revised the Basin Plan by updating the ammonia objectives for inland surface waters not characteristic of freshwater such that they are consistent with the USEPA "Ambient Water Quality Criteria for Ammonia (Saltwater)-1989." The amendment also includes language for implementing the revised objectives in the Los Angeles Region. The Discharger is directed to utilize the data collected to calculate the total ammonia limitation from the unionized ammonia requirements supplied in Resolution No. 2004-022.

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

Parameter	Units	Final Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
<i>Conventional Pollutants</i>					
Biochemical Oxygen Demand	mg/L	20	30	---	---
5-day @ 20°C (BOD)	lbs/day ¹	721	1,081	---	---
Oil and Grease	mg/L	10	15	---	---
	lbs/day ¹	360	540	---	---
pH	standard units	---	---	6.5	8.5
Total Suspended Solids (TSS)	mg/L	50	75	---	---
	lbs/day ¹	1,801	2,702	---	---
<i>Priority Pollutants</i>					
Copper, Total Recoverable ²	µg/L	2.9 ²	5.8 ²	---	---
	lbs/day ¹	0.1	0.21	---	---
Zinc, Total Recoverable	µg/L	47	95	---	---
	lbs/day ¹	1.7	3.4	---	---
<i>Non-Conventional Pollutants/Parameters</i>					
Flow	MGD	---	4.32	---	---
Temperature	°F	---	86	---	---
Turbidity	NTU	50	75	---	---

¹Based on a flow of 4.32 MGD

²If the influent water copper concentration does not exceed the average monthly limitation then the limitations are applied as noted in the table. If the influent water copper 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 copper 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. When determining compliance based on intake water credit, the copper effluent limitation is equal to the maximum copper concentration in the influent water. The equation is as follows:

$$\text{Cu Effluent Limitation with Intake Water Credit} = \text{Maximum Cu Influent Water Concentration}$$

- a. A log mean fecal coliform concentration of 200 MPN/100 ml (based on a minimum of not less than four samples for any 30-day period), and a value of 400 MPN/100ml for more than 10 percent of the total samples during any 30-day period.
- b. A mean annual dissolved oxygen concentration of at least 7 mg/L, with no single determination of less than 5.0 mg/L.

- c. Total un-ionized NH_3/L ammonia concentrations of 0.035 mg/L for the 4-day average and 0.233 mg/L for the one-hour average. These values are to be translated utilizing the implementation procedure included in Resolution No. 2004-022 which revised the saltwater ammonia concentrations in the 1994 Basin Plan.

The implementation procedure requires:

1. Determine the applicable water quality objectives for ammonia for the receiving water immediately downstream of the discharge (utilize the Determination of Freshwater, Brackish Water or Saltwater Conditions included in the Implementation section of Resolution No. 2004-022).
2. Since there is no mixing zone established;
ECA = WQO
3. To adjust the un-ionized saltwater ammonia objective to an ECA expressed as total ammonia, the following equation shall be used:

$$[\text{NH}_4^+] + [\text{NH}_3] = [\text{NH}_3] + [\text{NH}_3] \cdot 10^{\lambda} (\text{pK}_a^s + 0.0324 (298 - T) + 0.0415 \text{ P/T-pH})$$

Where:

P = 1 atm

T = temperature ($^{\circ}\text{K}$)

$\text{pK}_a^s = 0.116 * T + 9.245$, the stoichiometric acid hydrolysis constant of ammonium ions in saltwater based on i

i = $19.9273 \text{ S} (1000 - 1.005109 \text{ S})^{-1}$, the molal ionic strength of saltwater based on S

S = salinity

(Per U.S. EPA Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989)

d. Toxicity Requirements

1. Acute Toxicity.

Acute toxicity is a measure of primarily lethal effects that occur over a 96-hour period. Acute toxicity shall be measured in percent survival measured in undiluted (100%) effluent.

STELLAR BIOTECHNOLOGIES, INC.
STELLAR BIOTECHNOLOGIES, INC. FACILITY
ORDER NO. R4-2008-0210
AMENDING ORDER NO. R4-2007-0004
NPDES NO. CA0063070

- a. The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90% survival, and
- b. No single test shall produce less than 70% survival.

2. Chronic Toxicity.

Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Chronic toxicity shall be measured in TU_c , where $TU_c = 100/NOEC$. The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

- a. This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed, 1 TU_c in a critical life stage test.)

E. Interim Effluent Limitations

Not Applicable

F. Land Discharge Specifications

Not Applicable

G. Reclamation Specifications

Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (section 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in the Order are included to ensure protection of beneficial uses of the receiving water and are based on the water quality objectives contained in the Basin Plan.

B. Groundwater

Not Applicable

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the CWC authorize the Water Boards to require technical and monitoring reports. The MRP, Attachment E of this Order, establishes monitoring and reporting requirements to 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

Influent monitoring is required to collect data on the characteristics of the intake water and to assess compliance with the effluent limitations for copper and zinc.

According to section 1.4.4 of the SIP, the Regional Water Board may consider priority pollutants in intake water on a pollutant-by-pollutant and discharge-by-discharge basis when establishing WQBELs, provided the Discharger has demonstrated certain conditions specified in section 1.4.4 of the SIP. The Discharger has demonstrated that intake water credit is appropriate for the discharge of copper. Therefore, the Discharger is required to monitor the intake water for copper and zinc twice per quarter to provide data for the Regional Water Board to consider intake water credits when establishing WQBELs.

B. Effluent Monitoring

Monitoring for those pollutants expected to be present in the discharge will be required as specified in the Monitoring and Reporting Program (Attachment E). To determine compliance with the effluent limitations, the proposed monitoring plan requires monitoring of BOD, fecal coliform, oil and grease, pH, TSS, copper, zinc, flow, ammonia-nitrogen, dissolved oxygen,

temperature, and toxicity. In addition, the permit requires monitoring of nitrates, nitrites, settleable solids and CTR priority pollutants annually.

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. As a result, this Order contains effluent limitations and monitoring requirements for acute toxicity and requirements for chronic toxicity testing.

D. Receiving Water Monitoring

1. Surface Water

According to the SIP, the Discharger is required to monitor the receiving water for the CTR priority pollutants, to determine reasonable potential. Accordingly, the Regional Water Board is requiring that the Discharger conduct receiving water monitoring of the CTR priority pollutants at Monitoring Location RSW-001 once during the permit term. The Discharger is also required to monitor the receiving water for pH, total ammonia, salinity, and temperature once per quarter, during the permit term, to provide sufficient data to develop effluent limitations for total ammonia in accordance with the Basin Plan amendment adopted March 4, 2004 (Resolution No. 2004-022).

The Discharger is also required to perform general observations of the receiving water when discharges occur and report the 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 objectionable growths.

2. Groundwater

Not Applicable

E. Other Monitoring Requirements

Monitoring and reporting of Best Management Practices Plan is required to ensure the plans are being implemented, monitored and revised as needed. Chemical use, storage and disposal monitoring and reporting is required to ensure the Regional Water Board is adequately notified of changes in chemical use and of potential sources of pollutants in wastewaters from the site.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions

Standard Provisions, which in accordance with 40 CFR sections 122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D to the Order.

2. Regional Water Board Standard Provisions

Regional Water Board Standard Provisions are based on the CWA, USEPA regulations, and the CWC.

B. Special Provisions

1. Reopener Provisions

These provisions are based on 40 CFR Part 123 and the existing 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

Toxicity Identification Evaluations or Toxicity Reduction Evaluations. The provision for TIE/TRE is based on the SIP, Section 4, 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 (BMPP)

The objective of the Order is to protect the beneficial uses of receiving waters. To meet this objective, the Order requires the Discharger to develop and implement a BMPP and address the wastewater discharges to the Port Hueneme Harbor. The Discharger uses, stores, handles and disposes of materials, chemicals, and wastes at the facility, and conducts operational and maintenance activities to its facility and equipment that are potential or existing sources of pollutants in wastewater discharged from the facility. Therefore, this Order requires the discharger to develop and implement a BMPP that entails 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 Best Management Practices (BMPs), the discharger is required to consider implementing BMPs contained in the USEPA *Guidance Manual for Developing Best Management Practices (BMPs)* (EPA 833-B-93-004) or equivalent alternatives when developing its BMPP.

4. Compliance Schedules

Not Applicable

5. Construction, Operation, and Maintenance Specifications

This provision is based on the requirements of 40 CFR section 122.41(e). Proper operation and maintenance of facilities and systems is required to limit the discharge of pollutants through mismanagement and operation.

6. Special Provisions for Municipal Facilities (POTWs Only)

Not Applicable

7. Other Special Provisions

Not Applicable

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Board, Los Angeles Region (Regional Water Board) is considering the issuance of an amendment to the waste discharge requirements (WDRs) that will serve as a National Pollution Discharge Elimination System (NPDES) permit for Stellar Biotechnologies, Inc. The Regional Water Board staff has developed the proposed amendments to the WDRs. The Regional Water Board encourages public participation in the adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to amend the prescribed waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning the tentative amendments to the WDRs. Comments must be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on November 24, 2008. The comments should also be submitted in Word format to rchristmann@waterboards.ca.gov.

C. Public Hearing

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

Date: **December 11, 2008**
Time: **9:00 A.M.**
Location: **City of Simi Valley
Council Chambers
2929 Tapo Canyon Road
Simi Valley, CA**

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, amendments to the WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is <http://www.waterboards.ca.gov/losangeles> where you can access the current agenda for changes in dates and locations.

D. Nature of Hearing

This will be a formal adjudicative hearing pursuant to section 648 et seq. of title 23 of the California Code of Regulations. Chapter 5 of the California Administrative Procedure Act (commencing with section 11500 of the Government Code) will not apply to this proceeding.

Ex Parte Communications Prohibited: As a quasi-adjudicative proceeding, no board member may discuss the subject of this hearing with any person, except during the public hearing itself. Any communications to the Regional Board must be directed to staff.

E. Parties to the Hearing

The following are the parties to this proceeding:

1. The applicant/permittee

Any other persons requesting party status must submit a written or electronic request to staff not later than 20 business days before the hearing. All parties will be notified if other persons are so designated.

F. Public Comments and Submittal of Evidence

Persons wishing to comment upon or object to the tentative amendments to the waste discharge requirements, or submit evidence for the Board to consider, are invited to submit them in writing to the above address. To be evaluated and responded to by staff, included in the Board's agenda folder, and fully considered by the Board, written comments must be received no later than close of business on November 24, 2008. Comments or evidence received after that date will be included in the administrative record with express approval of the Chair during the hearing, only upon a showing of good cause, and only if it will not prejudice any other party or Regional Board staff. Additionally, if the Board receives only supportive comments, the permit may be placed on the Board's consent calendar, and approved without an oral testimony.

G. Hearing Procedure

The meeting, in which the hearing will be a part of, will start at 9:00 a.m. Interested persons are invited to attend. Staff will present the matter under consideration, after which oral statements from parties or interested persons will be heard. For accuracy of the record, all important testimony should be in writing. The Board will include in the administrative record written transcriptions of oral testimony that is actually presented at the hearing. Oral testimony may be limited to 3 minutes maximum or less for each speaker, depending on the number of persons wishing to be heard. Parties or persons with similar concerns or opinions are encouraged to choose one representative to speak. At the conclusion of testimony, the Board will deliberate in open or close session, and render a decision.

Parties or persons with special procedural requests should contact staff. Any procedure not specified in this hearing notice will be waived pursuant to section 648(d) of title 23 of the

California Code of Regulations. Objections to any procedure to be used during this hearing must be submitted in writing not later than close of business 15 days prior to the date of the hearing. Procedural objections will not be entertained at the hearing.

If there should not be a quorum on the scheduled date of this meeting, all cases will be automatically continued to the next scheduled meeting on February 5, 2009. A continuance will not extend any time set forth herein.

H. Waste Discharge Requirements Petitions

Any person aggrieved by this action of the Regional Board may petition the State Water Resources Control Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must receive the petition by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

The mailing address of the State Water Board is the following:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

I. Information and Copying

The Report of Waste Discharge, related documents, tentative amendments to the effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address below 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.

California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

J. 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.

K. Additional Information

Requests for additional information or questions regarding this order should be directed to Rebecca Christmann at (213) 576-6756.

ATTACHMENT G – STATE WATER BOARD MINIMUM LEVELS

SWB Minimum Levels in ppb (µg/L)

The Minimum Levels (MLs) in this appendix are for use in reporting and compliance determination purposes in accordance with section 2.4 of the State Implementation Policy. These MLs were derived from data for priority pollutants provided by State certified analytical laboratories in 1997 and 1998. These MLs shall be used until new values are adopted by the SWRCB 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 – PRIORITY POLLUTANTS LIST

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
1	Antimony	7440360	EPA 6020/200.8
2	Arsenic	7440382	EPA 1632
3	Beryllium	7440417	EPA 6020/200.8
4	Cadmium	7440439	EPA 1638/200.8
5a	Chromium (III)	16065831	EPA 6020/200.8
5a	Chromium (VI)	18540299	EPA 7199/1636
6	Copper	7440508	EPA 6020/200.8
7	Lead	7439921	EPA 1638
8	Mercury	7439976	EPA 1669/1631
9	Nickel	7440020	EPA 6020/200.8
10	Selenium	7782492	EPA 6020/200.8
11	Silver	7440224	EPA 6020/200.8
12	Thallium	7440280	EPA 6020/200.8
13	Zinc	7440666	EPA 6020/200.8
14	Cyanide	57125	EPA 9012A
15	Asbestos	1332214	EPA/600/R-93/116(PCM)
16	2,3,7,8-TCDD	1746016	EPA 8290 (HRGC) MS
17	Acrolein	107028	EPA 8260B
18	Acrylonitrile	107131	EPA 8260B
19	Benzene	71432	EPA 8260B
20	Bromoform	75252	EPA 8260B
21	Carbon Tetrachloride	56235	EPA 8260B
22	Chlorobenzene	108907	EPA 8260B
23	Chlorodibromomethane	124481	EPA 8260B
24	Chloroethane	75003	EPA 8260B
25	2-Chloroethylvinyl Ether	110758	EPA 8260B
26	Chloroform	67663	EPA 8260B
27	Dichlorobromomethane	75274	EPA 8260B
28	1,1-Dichloroethane	75343	EPA 8260B
29	1,2-Dichloroethane	107062	EPA 8260B
30	1,1-Dichloroethylene	75354	EPA 8260B
31	1,2-Dichloropropane	78875	EPA 8260B
32	1,3-Dichloropropylene	542756	EPA 8260B
33	Ethylbenzene	100414	EPA 8260B
34	Methyl Bromide	74839	EPA 8260B
35	Methyl Chloride	74873	EPA 8260B
36	Methylene Chloride	75092	EPA 8260B
37	1,1,2,2-Tetrachloroethane	79345	EPA 8260B
38	Tetrachloroethylene	127184	EPA 8260B
39	Toluene	108883	EPA 8260B
40	1,2-Trans-Dichloroethylene	156605	EPA 8260B
41	1,1,1-Trichloroethane	71556	EPA 8260B
42	1,1,2-Trichloroethane	79005	EPA 8260B
43	Trichloroethylene	79016	EPA 8260B
44	Vinyl Chloride	75014	EPA 8260B
45	2-Chlorophenol	95578	EPA 8270C

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
46	2,4-Dichlorophenol	120832	EPA 8270C
47	2,4-Dimethylphenol	105679	EPA 8270C
48	2-Methyl-4,6-Dinitrophenol	534521	EPA 8270C
49	2,4-Dinitrophenol	51285	EPA 8270C
50	2-Nitrophenol	88755	EPA 8270C
51	4-Nitrophenol	100027	EPA 8270C
52	3-Methyl-4-Chlorophenol	59507	EPA 8270C
53	Pentachlorophenol	87865	EPA 8270C
54	Phenol	108952	EPA 8270C
55	2,4,6-Trichlorophenol	88062	EPA 8270C
56	Acenaphthene	83329	EPA 8270C
57	Acenaphthylene	208968	EPA 8270C
58	Anthracene	120127	EPA 8270C
59	Benzidine	92875	EPA 8270C
60	Benzo(a)Anthracene	56553	EPA 8270C
61	Benzo(a)Pyrene	50328	EPA 8270C
62	Benzo(b)Fluoranthene	205992	EPA 8270C
63	Benzo(ghi)Perylene	191242	EPA 8270C
64	Benzo(k)Fluoranthene	207089	EPA 8270C
65	Bis(2-Chloroethoxy)Methane	111911	EPA 8270C
66	Bis(2-Chloroethyl)Ether	111444	EPA 8270C
67	Bis(2-Chloroisopropyl)Ether	108601	EPA 8270C
68	Bis(2-Ethylhexyl)Phthalate	117817	EPA 8270C
69	4-Bromophenyl Phenyl Ether	101553	EPA 8270C
70	Butylbenzyl Phthalate	85687	EPA 8270C
71	2-Chloronaphthalene	91587	EPA 8270C
72	4-Chlorophenyl Phenyl Ether	7005723	EPA 8270C
73	Chrysene	218019	EPA 8270C
74	Dibenzo(a,h)Anthracene	53703	EPA 8270C
75	1,2-Dichlorobenzene	95501	EPA 8260B
76	1,3-Dichlorobenzene	541731	EPA 8260B
77	1,4-Dichlorobenzene	106467	EPA 8260B
78	3,3'-Dichlorobenzidine	91941	EPA 8270C
79	Diethyl Phthalate	84662	EPA 8270C
80	Dimethyl Phthalate	131113	EPA 8270C
81	Di-n-Butyl Phthalate	84742	EPA 8270C
82	2,4-Dinitrotoluene	121142	EPA 8270C
83	2,6-Dinitrotoluene	606202	EPA 8270C
84	Di-n-Octyl Phthalate	117840	EPA 8270C
85	1,2-Diphenylhydrazine	122667	EPA 8270C
86	Fluoranthene	206440	EPA 8270C
87	Fluorene	86737	EPA 8270C
88	Hexachlorobenzene	118741	EPA 8260B
89	Hexachlorobutadiene	87863	EPA 8260B
90	Hexachlorocyclopentadiene	77474	EPA 8270C
91	Hexachloroethane	67721	EPA 8260B
92	Indeno(1,2,3-cd)Pyrene	193395	EPA 8270C
93	Isophorone	78591	EPA 8270C
94	Naphthalene	91203	EPA 8260B
95	Nitrobenzene	98953	EPA 8270C
96	N-Nitrosodimethylamine	62759	EPA 8270C
97	N-Nitrosodi-n-Propylamine	621647	EPA 8270C

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
98	N-Nitrosodiphenylamine	86306	EPA 8270C
99	Phenanthrene	85018	EPA 8270C
100	Pyrene	129000	EPA 8270C
101	1,2,4-Trichlorobenzene	120821	EPA 8260B
102	Aldrin	309002	EPA 8081A
103	alpha-BHC	319846	EPA 8081A
104	beta-BHC	319857	EPA 8081A
105	gamma-BHC	58899	EPA 8081A
106	delta-BHC	319868	EPA 8081A
107	Chlordane	57749	EPA 8081A
108	4,4'-DDT	50293	EPA 8081A
109	4,4'-DDE	72559	EPA 8081A
110	4,4'-DDD	72548	EPA 8081A
111	Dieldrin	60571	EPA 8081A
112	alpha-Endosulfan	959988	EPA 8081A
113	beta-Endosulfan	33213659	EPA 8081A
114	Endosulfan Sulfate	1031078	EPA 8081A
115	Endrin	72208	EPA 8081A
116	Endrin Aldehyde	7421934	EPA 8081A
117	Heptachlor	76448	EPA 8081A
118	Heptachlor Epoxide	1024573	EPA 8081A
119	PCB-1016	12674112	EPA 8082
120	PCB-1221	11104282	EPA 8082
121	PCB-1232	11141165	EPA 8082
122	PCB-1242	53469219	EPA 8082
123	PCB-1248	12672296	EPA 8082
124	PCB-1254	11097691	EPA 8082
125	PCB-1260	11096825	EPA 8082
126	Toxaphene	700 North1352	EPA 8081A

STELLAR BIOTECHNOLOGIES, INC.
STELLAR BIOTECHNOLOGIES, INC. FACILITY
ORDER NO. R4-2008-0210
AMENDING ORDER NO. R4-2007-0004
NPDES NO. CA0063070

ATTACHMENT I

**Attachment I
Fact Sheet
Draft Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)**

CTR#	Parameters	Units	CY	MEC	Freshwater		Saltwater		Human Health for consumption of:		REASONABLE POTENTIAL ANALYSIS (RPA)							RPA Result - Need Limit?	Reason
					C acute = C chronic = CCC tot	C acute = C chronic = CCC tot	C acute = C chronic = CCC tot	C acute = C chronic = CCC tot	Water & Organisms only	Organisms only	Are all B data points non-detects (Y/N)?	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MD > C7	If B > C, effluent limit required	Tier 3 - other info, 7				
63	Benzodifolip-ethylene	ug/L	0.6	No Criteria															No effluent data & no B
64	Benzofluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
65	Benzofluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
66	Benzofluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
67	Benzofluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
68	Benzofluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
69	Benzofluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
70	Benzofluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
71	2-Chlorophenyl Ethyl	ug/L	0.6	No Criteria															No effluent data & no B
72	2-Chlorophenyl Ethyl	ug/L	0.6	No Criteria															No effluent data & no B
73	Chrysene	ug/L	0.6	No Criteria															No effluent data & no B
74	Chrysene	ug/L	0.6	No Criteria															No effluent data & no B
75	1,2-Dichlorobenzene	ug/L	0.6	No Criteria															No effluent data & no B
76	1,2-Dichlorobenzene	ug/L	0.6	No Criteria															No effluent data & no B
77	1,4-Dichlorobenzene	ug/L	0.6	No Criteria															No effluent data & no B
78	1,4-Dichlorobenzene	ug/L	0.6	No Criteria															No effluent data & no B
79	Dibenzophthalate	ug/L	0.6	No Criteria															No effluent data & no B
80	Dibenzophthalate	ug/L	0.6	No Criteria															No effluent data & no B
81	Dibenzophthalate	ug/L	0.6	No Criteria															No effluent data & no B
82	2,4-Dinitrotoluene	ug/L	0.6	No Criteria															No effluent data & no B
83	2,4-Dinitrotoluene	ug/L	0.6	No Criteria															No effluent data & no B
84	2,6-Dinitrotoluene	ug/L	0.6	No Criteria															No effluent data & no B
85	1,2-Diphenylhydrazine	ug/L	0.6	No Criteria															No effluent data & no B
86	Fluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
87	Fluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
88	Fluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
89	Fluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
90	Fluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
91	Fluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
92	Fluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
93	Fluoranthene	ug/L	0.6	No Criteria															No effluent data & no B
94	Naphthalene	ug/L	0.6	No Criteria															No effluent data & no B
95	Naphthalene	ug/L	0.6	No Criteria															No effluent data & no B
96	N-Nitrosodimethylamine	ug/L	0.6	No Criteria															No effluent data & no B
97	N-Nitrosodimethylamine	ug/L	0.6	No Criteria															No effluent data & no B
98	N-Nitrosodiphenylamine	ug/L	0.6	No Criteria															No effluent data & no B
99	Phenanthrene	ug/L	0.6	No Criteria															No effluent data & no B
100	Pyrene	ug/L	0.6	No Criteria															No effluent data & no B
101	1,2,4-Trichlorobenzene	ug/L	0.6	No Criteria															No effluent data & no B
102	Aldrin	ug/L	0.6	No Criteria															No effluent data & no B
103	Aldrin	ug/L	0.6	No Criteria															No effluent data & no B
104	beta-BHC	ug/L	0.6	No Criteria															No effluent data & no B
105	beta-BHC	ug/L	0.6	No Criteria															No effluent data & no B
106	delta-BHC	ug/L	0.6	No Criteria															No effluent data & no B
107	Chlordane	ug/L	0.6	No Criteria															No effluent data & no B
108	4,4'-DDD	ug/L	0.6	No Criteria															No effluent data & no B
109	4,4'-DDD	ug/L	0.6	No Criteria															No effluent data & no B
110	4,4'-DDD	ug/L	0.6	No Criteria															No effluent data & no B
111	Chlordane	ug/L	0.6	No Criteria															No effluent data & no B
112	alpha-Endosulfan	ug/L	0.6	No Criteria															No effluent data & no B
113	beta-Endosulfan	ug/L	0.6	No Criteria															No effluent data & no B
114	Endosulfan sulfate	ug/L	0.6	No Criteria															No effluent data & no B
115	Endosulfan sulfate	ug/L	0.6	No Criteria															No effluent data & no B
116	Endrin Alderhyde	ug/L	0.6	No Criteria															No effluent data & no B
117	Heptachlor Epoxide	ug/L	0.6	No Criteria															No effluent data & no B
118	Heptachlor Epoxide	ug/L	0.6	No Criteria															No effluent data & no B
119	PCBS	ug/L	0.6	No Criteria															No effluent data & no B
120	PCBS	ug/L	0.6	No Criteria															No effluent data & no B
121	PCBS	ug/L	0.6	No Criteria															No effluent data & no B
122	Toxaphene	ug/L	0.6	No Criteria															No effluent data & no B

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

Attachment I
Fact Sheet
Draft Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)

CTR#	Parameters	HUMAN HEALTH CALCULATIONS				AQUATIC LIFE CALCULATIONS						LIMITS		Recommendation	Comment	
		AMEL hh = ECA = C hh O only	AMEL/AMEL multiplier	MEDEL hh	ECA acute multiplier (12.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL eq multiplier life	MEDEL multiplier 99	MEDEL eq life			Lowest AMEL
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		2.01		0.32	1.86	0.53	1.97	1.96	1.55	2.88	3.11	5.783133	2.88	5.78	
7	Lead														No Limit	
8	Nickel														No Limit	
9	Nickel														No Limit	
10	Selenium														No Limit	
11	Silver														No Limit	
12	Thallium														No Limit	
13	Zinc		2.01		0.32	30.55	0.53	45.16	30.55	1.55	47.42	3.11	95.13742	47.42	95.14	
14	Cyanide														No Limit	
15	Asbestos														No Limit	
16	2,3,7,8 TCDD														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-Chloroethyl vinyl ether														No Limit	
26	Chloroform														No Limit	
27	Dichlorobromomethane														No Limit	
28	1,1-Dichloroethane														No Limit	
29	1,1-Dichloroethene														No Limit	
30	1,2-Dichloroethane														No Limit	
31	1,2-Dichloroethene														No Limit	
32	1,3-Dichloropropane														No Limit	
33	1,3-Dichloropropene														No Limit	
34	1,3-Dichloropropane														No Limit	
35	Methyl Bromide														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 (aka 2,6-dinitro-1,3-dichlorophenol)														No Limit	
49	2-Nitrophenol														No Limit	
50	2-Nitrophenol														No Limit	
51	4-Nitrophenol														No Limit	
52	3-Methyl-4-Chlorophenol (aka 7-Chloro-m-cresol)														No Limit	
53	2-Nitrophenol														No Limit	
54	Phenol														No Limit	
55	2,4,6-Trichlorophenol														No Limit	
56	Acenaphthene														No Limit	
57	Acenaphthylene														No Limit	
58	Acenaphthene														No Limit	
59	Benzo(a)anthracene														No Limit	
60	Benzo(a)pyrene														No Limit	
61	Benzo(b)fluoranthene														No Limit	
62	Benzo(k)fluoranthene														No Limit	

Attachment I
Fact Sheet
Draft Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)

CTR#	Parameters	HUMAN HEALTH CALCULATIONS				AQUATIC LIFE CALCULATIONS				LIMITS		Recommendation	Comment	
		Organisms only		AMEL hh = ECA = C hh O only		Freshwater / Basin Plan		LTA		Lowest AMEL	Lowest MDEL			
		AMEL multiplier	MODEL hh	ECA acute multiplier (6.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier					AMEL multiplier
63	Benz(a)h-Perylene												No Limit	
64	Benz(a)fluoranthene												No Limit	
65	Benz(b)fluoranthene												No Limit	
66	Benz(k)fluoranthene												No Limit	
67	Benz(e)pyrene												No Limit	
68	Bis(2-ethylhexyl)phthalate												No Limit	
69	4-Bromobenzophenone												No Limit	
70	Bis(2-ethylhexyl)phthalate												No Limit	
71	2-Chlorophthalate												No Limit	
72	4-Chlorophthalate												No Limit	
73	Chrysene												No Limit	
74	Dibenz(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	Hexachlorocyclopentadiene												No Limit	
92	Heptachlor epoxide												No Limit	
93	Heptachlor epoxide												No Limit	
94	Hexachlorocyclopentadiene												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'-DDT (linked to DDT)												No Limit	
110	4,4'-DDT												No Limit	
111	Dieldrin												No Limit	
112	alpha-Endosulfan												No Limit	
113	beta-Endosulfan												No Limit	
114	Endosulfan Sulfate												No Limit	
115	Endrin Aldehyde												No Limit	
116	Endrin												No Limit	
117	Heptachlor Epoxide												No Limit	
118	Heptachlor Epoxide												No Limit	
119-125	1,2,3,4,5,6-Hexachlorocyclopentadiene												No Limit	
126	Toxaphene												No Limit	

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