

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LOS ANGELES REGION

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ORDER NO. R4-2008-0024

NPDES NO. CA0058556

**WASTE DISCHARGE REQUIREMENTS
FOR
SOUTHERN CALIFORNIA MARINE INSTITUTE
FISH HARBOR LABORATORY**

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	Southern California Marine Institute
Name of Facility	Fish Harbor Laboratory
Facility Address	820 South Seaside Avenue
	Terminal Island, California 90731
	Los Angeles County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

The discharge by the Southern California Marine Institute from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

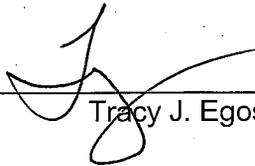
Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Aquaria water and filter backwash	33°, 44', 14" N	118°, 15', 10" W	Fish Harbor (Los Angeles Inner Harbor)

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	May 1, 2008
This Order shall become effective on:	May 31, 2008
This Order shall expire on:	April 10, 2013
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days prior to the Order expiration date.

IT IS HEREBY ORDERED, that Order No. 01-152 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted pursuant thereto, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted pursuant thereto, the Discharger shall comply with the requirements in this Order.

I, Tracy J. Egoscue, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on May 1, 2008.



Tracy J. Egoscue, Executive Officer

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I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 4. Facility Information

Discharger	Southern California Marine Institute
Name of Facility	Fish Harbor Laboratory
Facility Address	820 South Seaside Avenue
	Terminal Island, California 90731
	Los Angeles County
Facility Contact, Title, and Phone	Richard E. Pieper, Ph. D. Director, (310) 519-3176 Ext. 977
Mailing Address	Same as above
Type of Facility	Marine Science Research Laboratory
Facility Design Flow	Not applicable

II. FINDINGS

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

- A. **Background.** Southern California Marine Institute (hereinafter Discharger or SCMI) is currently discharging pursuant to Order No. 01-152 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0058556. The Discharger submitted a Report of Waste Discharge (ROWD), dated January 25, 2007, and applied for an NPDES permit renewal to discharge up to 230,000 gallons per day (gpd) of untreated wastewater from the Fish Harbor Laboratory, hereinafter Facility. The application was deemed complete on February 7, 2007.

SCMI is an organization composed of a consortium of nine local universities. The universities include the Ocean Studies Institute (composed of seven California State Universities), the University of Southern California and its Wrigley Institute for Environmental Studies, and Occidental College's Vantuna Research Group.

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

- B. **Facility Description.** The Discharger owns and operates a marine research and educational Facility, the Fish Harbor Laboratory located at 820 South Seaside Avenue, Terminal Island, California. The Facility is an open seawater aquaculture system for the study of live local marine organisms. The organisms are maintained in holding tanks and aquaria while under study. Seawater is pumped from the Los Angeles Fish Harbor (Berth 260), filtered through a sand filter and fed into a series of holding tanks and aquaria, and then discharged back into the harbor. As the water passes through the tanks and aquaria, negligible levels of metabolic wastes from the marine organisms are contributed to the water flow. The sand filter is backwashed for about five minutes per day with about 1,000 gallons of seawater. The Discharger proposes to discharge up to 230,000 gpd of wastewater consisting of filter backwash water and seawater circulated to a series of holding tanks through Discharge Point 001 (Latitude 33°, 44', 14" North, Longitude 118°, 15', 10" West) to the Los Angeles Fish Harbor (Berth 260), a water of the United States. Attachment B provides a topographic map of the area around the facility. Attachment C provides a flow schematic of the facility.

The previous permit authorized the discharge of 150,000 gpd of wastewater. In the ROWD, the Discharger requested to increase the discharge flow rate to a maximum of 230,000 gpd in order to hold large fish in a tank for one to seven days before the fish are transported to large public aquariums.

- 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 (commencing with section 13370). It shall serve as an 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, division 7 of the Water Code (commencing with section 13260).
- 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 other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is

hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E, and H through J are also incorporated into this Order.

- E. **California Environmental Quality Act (CEQA).** Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of the CEQA, Public Resources Code sections 21100 – 21177.
- F. **Technology-based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations¹, require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet.
- G. **Water Quality-based Effluent Limitations.** Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

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

The USEPA approved the State's 2006 303(d) list of impaired water bodies on June 28, 2007. 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 2006 303(d) list and have been scheduled for TMDL development. The facility discharges directly into Fish Harbor, a part of the Los Angeles-Long Beach Harbor (All Other Inner Areas). The 2006 State Water Board's California 303(d) List classifies the Fish Harbor as impaired. The pollutants of concern include benzo(a)pyrene (PAHs), benzo(a)anthracene, chlordane, chrysene (C1-C4), copper, dichloro diphenyl trichloroethane (DDT), dibenzo(a,h)anthracene, lead, mercury, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), phenanthrene, pyrene, zinc, and sediment toxicity. To date, only a bacteria TMDL has been developed for the Inner Cabrillo Beach and the Main Ship Channel of the Los Angeles Inner Harbor. This Order prescribes effluent limitations for bacteria based on the Basin Plan that are as stringent as the TMDL bacteria limitations.

- H. **Water Quality Control Plans.** The Regional Water Board adopted a Water Quality Control Plan for the Los Angeles Region (hereinafter Basin Plan) on June 13, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board)

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

Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

The Basin Plan at page 2-4 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan does not specifically identify beneficial uses for Fish Harbor, but does identify present and potential uses for the Los Angeles-Long Beach Harbor (All Other Inner Areas). Thus, as discussed in detail in the Fact Sheet (Attachment F), beneficial uses applicable to Fish Harbor are as shown in Table 5:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Uses
001	Fish Harbor (Los Angeles Inner Harbor)	<p><u>Existing:</u> Industrial service supply (IND), navigation (NAV), Non-contact water recreation (REC-2), commercial and sport fishing (COMM), marine habitat (MAR), and rare, threatened or endangered species (RARE)¹.</p> <p><u>Potential:</u> Water contact recreation (REC-1), and shellfish harvesting (SHELL).</p>

¹ One or more rare species utilize all oceans, bays, estuaries, and coastal wetlands for foraging and/or nesting.

Ammonia Basin Plan Amendment. The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Table 3-1 through Table 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 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 surface waters. Requirements of this Order implement the Thermal Plan.

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

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

While the discharge from the Southern California Marine Institute discharges into the Los Angeles Fish Harbor, within the enclosed bay, the wastewater is comprised primarily of aquaria water filter backwash water, and therefore is not considered to be industrial process wastewater. Nonetheless, this Order contains provisions necessary to protect all beneficial uses of the receiving water.

- I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and 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.
- 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 of 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 TMDL applicable to the discharge that has been approved by the RWQCB, SWRCB, and U.S. EPA;
- (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 and additional information submitted, the Discharger has demonstrated that the above conditions are met. Therefore, this Order includes effluent limitations for copper based on the intake water credits. A detailed discussion of the basis for the intake water credits for 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 Los Angeles Region 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. **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.
- M. **Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on total suspended solids (TSS), turbidity,

biochemical oxygen demand (BOD), oil and grease, and settleable solids. Restrictions on TSS, turbidity, BOD, oil and grease, and settleable solids are discussed in section IV.B in the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

Water quality-based effluent limitations 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 water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants 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©(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

- N. **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. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.
- O. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.
- P. **Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The discharger is responsible for meeting all requirements of the applicable Endangered Species Act.
- Q. **Caulerpa Taxifolia and Other Taxa of Caulerpa.** *Caulerpa taxifolia* and other taxa of *Caulerpa* are non-native seaweed species that threaten coastal marine life, including kelp forests and their related fish, marine mammals, and sea birds if allowed to become permanently established in the surface waters of the United States. *Caulerpa taxifolia* has the ability to form a dense smothering blanket of growth on any surface (rock, sand, or mud). It is capable of

extremely rapid growth-up to one inch per day and any small fragment of this seaweed has the potential to start a new colony, which can expand to cover more than 75 square feet within one year. It can grow in shallow coastal lagoons as well as in deeper ocean waters, and can reportedly survive for up to ten days out of water.

On September 25, 2001, the Secretary of State chaptered Assembly Bill (AB) 1334 regarding *Caulerpa* Species as Chapter 338, Statutes of 2001. AB 1334 added section 2300 to the California Fish and Game proscribing limits on possessing and releasing live *Caulerpa* taxa. As an urgency statute, AB 1334 is effective immediately. In light of the Discharger's operations and the nature of its discharge, this Order advises the Discharger of Fish and Game Code section 2300, and requires the Discharger to comply with section 2300's provisions.

- R. **Monitoring and Reporting.** Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board 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.
- S. **Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. 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.
- T. **Provisions and Requirements of Implementing State Law.** The provisions and requirements in subsections IV.B, IV.C, V.B, and VI.C of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.
- U. **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 of this Order.
- V. **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 of this Order.

IT IS HEREBY ORDERED, that Order No. 01-152 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted pursuant thereto, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted pursuant thereto, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

- A. Wastes discharged shall be limited to a maximum of 230,000 gpd of aquaria wastewater and filter backwash water as described in the findings. The discharge of wastes from accidental spills or other sources is prohibited.
- B. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, Fish Harbor (Los Angeles Inner Harbor), or other waters of the State, are prohibited.
- C. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or a nuisance as defined by Section 13050 of the Water Code.
- D. Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.
- E. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board as required by the Federal CWA and regulations adopted pursuant thereto. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Federal CWA, and amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.
- F. The discharge of any radiological, chemical, or biological warfare agent 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 aquaria and filter backwash wastewater maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location M-001 as described in the attached MRP (Attachment E):

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand 5-day @ 20°C (BOD)	mg/L	20	30	--	--
	Lbs/day ¹	38	58	--	--
Oil and Grease	µg/L	10	15	--	--
	Lbs/day ¹	19	29	--	--
pH	s.u.	--	--	6.5	8.5
Total Suspended Solids (TSS)	mg/L	50	75	--	--
	Lbs/day ¹	96	144	--	--
Copper	µg/L	--	9.4	--	--
	Lbs/day ¹	--	18	--	--
Mercury	µg/L	0.05	0.10	--	--
	Lbs/day ¹	0.0001	0.0002	--	--
Settleable Solids	ml/l	0.1	0.3	--	--
Turbidity	NTU	50	75	--	--
Temperature	°F	---	86	---	---

¹ Based on a flow of 0.230 MGD.

- 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. **Ammonia.** Total un-ionized ammonia (NH₃) water quality objectives of 0.035 mg/L for the 4-day average, and 0.233 mg/L for the 1-hour average. These values are to be translated utilizing the implementation procedure included in Resolution No. 2004-022 which revised the saltwater ammonia water quality objectives in the 1994 Basin Plan.

The implementation procedure requires:

- 1. Determine the downstream 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:

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

Where:

P = 1 atm

T = temperature (°K)

$\text{pK}_a^s = 0.116 \cdot i + 9.425$, 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 USEPA *Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989*)

- e. There shall be no toxicity in the discharge of effluent (aquaria discharge and filter backwash water). The acute toxicity of the effluent shall be such that:
 - 1. The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least ninety percent (90%), and

2. No single test producing less than 70% survival. Compliance with the toxicity objectives will be determined by the method described in Section V. of the MRP in Attachment E.

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 the Fish 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 percent of the dissolved oxygen content at saturation.
3. Surface water temperature to rise greater than 5°F above the natural temperature of the receiving waters at any time or place. At no time the temperature 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. 2004-022. Resolution No. 2004-022 revised the ammonia water quality objectives for inland surface waters not characteristic of freshwater in the 1994 Basin Plan, to be consistent with USEPA's "*Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989.*" Adopted on March 4, 2004, Resolution No. 2004-022 was approved by State Water Board, Office of Administrative Law (OAL) and USEPA on July 22, 2004, September 14, 2004, and May 19, 2005, 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 BOD 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 present 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 nuisance, or adversely effect beneficial uses of the receiving water.
18. 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 point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.
 - d. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to sections 301, 302, 303(d), 304, 306, 307, 316, 318, 405, and 423 of the Federal CWA and amendments thereto.
 - e. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal facility, and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.
 - f. Oil or oily material, chemicals, refuse, or other pollutionable 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;
 - (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 ten percent. Such notification shall include estimates of proposed production rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge 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 this Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Regional Water Board.
 - n. The Water Code provides that any person who violates a waste discharge requirement or a provision of the Water Code is subject to civil penalties of up to \$5,000 per day, \$10,000 per day, or \$25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to \$10 per gallon per day or \$25 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.

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.
- r. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
- s. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, average monthly effluent limitation, maximum daily effluent limitation, or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board by telephone (213) 576-6653 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.
- t. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Water Code § 1211.)

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the MRP and future revisions thereto, in Attachment E of this Order. If there is any conflict between provisions stated in the MRP and the Regional Water Board 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 RPA.

- c. This Order may be reopened and modified, to incorporate in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include requirements for the implementation of the watershed management approach or to include new MLs.
- d. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments, such as an update of an objective or the adoption of a TMDL for the Fish Harbor (Los Angeles Inner Harbor).
- e. This Order may be reopened upon submission by the Discharger of adequate information, as determined by the Regional Water Board, to provide for dilution credits or a mixing zone or intake credits, as may be appropriate.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Chronic Toxicity Trigger and Monitoring Requirements.** The Order contains a chronic 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.). The Discharger shall monitor the effluent once per permit life for chronic toxicity to determine the presence of chronic toxicity. If the chronic toxicity of the effluent exceeds 1.0 TU_c (defined in Section V.A of the Monitoring and Reporting Program, Attachment E), the Discharger shall immediately implement accelerated chronic toxicity testing, as required in Section V of the Monitoring and Reporting Program, Attachment E).
- b. **Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan.** The Discharger shall submit to the Regional Water Board an Initial Investigation Toxicity Reduction Evaluation (TRE) workplan (1-2 pages) **within 90 days** of the effective date of this permit. This plan shall describe the steps the permittee intends to follow in the event that toxicity is detected, and should include at a minimum:
 - 1) A description of the investigation and evaluation techniques that will be used to identify potential causes/sources of toxicity, effluent variability, and treatment system efficiency;
 - 2) A description of the facility's method of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility;
 - 3) 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) (Section V of the MRP, Attachment E) provides references for the guidance manuals that should be used for performing TIEs).

3. Best Management Practices and Pollution Prevention

The Discharger is required to develop and implement a Best Management Practices Plan (BMPP). The BMPs are to include schedules of activities, prohibitions of practices, cleaning and maintenance procedures, employee training, treatment methods, etc. that are employed to control discharge of pollutants from the Facility. The BMPs shall address all normal facility operations including, but not limited to: cleaning, feeding, transfer and importation of species, removal of dead species, storage and handling of raw material, and disposal of solid waste. The BMPP 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.

a. **Pollutant Minimization Plan (PMP).**

[Not Applicable]

4. Construction, Operation and Maintenance Specifications

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

5. Other Special Provisions

a. The Discharger shall comply with Fish and Game Code, section 2300 concerning the *Caulerpa* taxa, and shall submit to the Regional Board an updated report of waste discharge at least 180 days before it intends to possess *Caulerpa* taxa covered by Fish and Game Code, section 2300.

6. Compliance Schedules

[Not Applicable]

VII. COMPLIANCE DETERMINATION

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

A. Single Constituent Effluent Limitation.

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

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

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

C. Mass-based Effluent Limitations.

In calculating mass emission rates from the monthly average concentrations, use one half of the method detection limit for "Not Detected" (ND) and the estimated concentration for "Detected, but Not Quantified" (DNQ) for the calculation of the monthly average concentration. To be consistent with Limitations and Discharge Requirements, section VII.B, 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.

D. Multiple Sample Data.

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

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

E. Average Monthly Effluent Limitation (AMEL).

If the average (or when applicable, the median determined by subsection E above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. 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 MRP), the numerical average of the analytical results of these five samples will be used for compliance determination.

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

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

G. Instantaneous Minimum Effluent Limitation.

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

H. Instantaneous Maximum Effluent Limitation.

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

ATTACHMENT A – DEFINITIONS

DEFINITIONS

Arithmetic Mean (μ)

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

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

Average Monthly Effluent Limitation (AMEL)

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

Average Weekly Effluent Limitation (AWEL)

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

Bioaccumulative

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

Carcinogenic

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

Coefficient of Variation (CV)

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

Daily Discharge

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

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

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

Detected, but Not Quantified (DNQ)

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

Dilution Credit

Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA)

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

Enclosed Bays

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

Estimated Chemical Concentration

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

Estuaries

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

Inland Surface Waters

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

Instantaneous Maximum Effluent Limitation

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

Instantaneous Minimum Effluent Limitation

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

Maximum Daily Effluent Limitation (MDEL)

The highest allowable daily discharge of a pollutant.

Median

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

Method Detection Limit (MDL)

MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

µg/L: micrograms per Liter

mg/L: milligrams per Liter

MGD: million gallons per day

Minimum Level (ML)

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

Mixing Zone

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

Not Detected (ND)

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

Ocean Waters

The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Persistent Pollutants

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

Pollutant Minimization Program (PMP)

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

Pollution Prevention

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

Reporting Level (RL)

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

Satellite Collection System

The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Six-month Median Effluent Limitation

The highest allowable moving median of all daily discharges for any 180-day period.

Source of Drinking Water

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

Standard Deviation (σ)

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

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

where:

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

Toxicity Reduction Evaluation (TRE)

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

ACRONYMS AND ABBREVIATIONS

AMEL	Average Monthly Effluent Limitation
B	Background Concentration
BAT	Best Available Technology Economically Achievable
Basin Plan	<i>Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties</i>
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BMPPP	Best Management Practices Plan
BPJ	Best Professional Judgment
BOD	Biochemical Oxygen Demand 5-day @ 20 °C
BPT	Best Practicable Treatment Control Technology
C	Water Quality Objective
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
CWC	California Water Code
Discharger	Southern California Marine Institute
DMR	Discharge Monitoring Report
DNQ	Detected But Not Quantified
ELAP	California Department of Health Services Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines and Standards
Facility	Fish Harbor Laboratory
gpd	gallons per day
IC	Inhibition Coefficient
IC ₁₅	Concentration at which the organism is 15% inhibited
IC ₂₅	Concentration at which the organism is 25% inhibited
IC ₄₀	Concentration at which the organism is 40% inhibited
IC ₅₀	Concentration at which the organism is 50% inhibited
LA	Load Allocations
LOEC	Lowest Observed Effect Concentration
µg/L	micrograms per Liter
mg/L	milligrams per Liter
MDEL	Maximum Daily Effluent Limitation
MEC	Maximum Effluent Concentration
MGD	Million Gallons Per Day
ML	Minimum Level
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
PMEL	Proposed Maximum Daily Effluent Limitation
PMP	Pollutant Minimization Plan
POTW	Publicly Owned Treatment Works

QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
Ocean Plan	<i>Water Quality Control Plan for Ocean Waters of California</i>
Regional Water Board	California Regional Water Quality Control Board, Los Angeles Region
RPA	Reasonable Potential Analysis
SCP	Spill Contingency Plan
SIP	State Implementation Policy (<i>Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California</i>)
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	<i>Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California</i>
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 _c	Chronic 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
WQS	Water Quality Standards
%	Percent

ATTACHMENT B – TOPOGRAPHIC MAP

Southern California Marine Institute
NPDES Permit # CA0058556

EPA Form 1 General, Attachment XI, Map

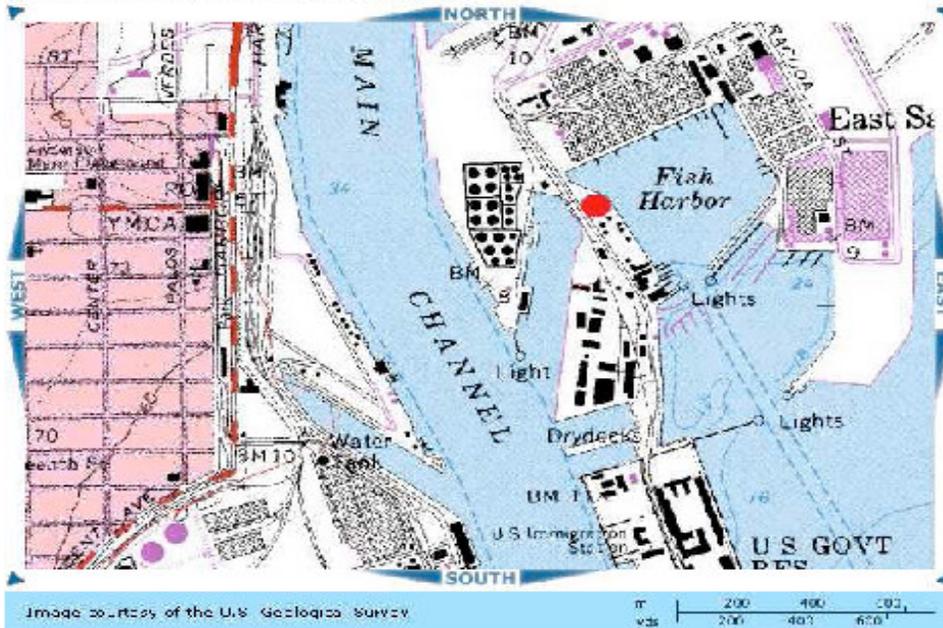


Figure 1. Topological map with the Southern California Marine Institute facility marked as a red circle.



Figure 2. Aerial photograph of the Southern California Marine Institute facility outlined in blue. The red circle designates the location of the discharge pipe with a picture in the upper right.

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 Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application [*section 122.41(a)*].
2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement [*section 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 [*section 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 [*section 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 [*section 122.41(e)*].

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [*section 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 [*section 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 [section 122.41(i)] [Water Code section 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 [section 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 [section 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 [section 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 Water Code, any substances or parameters at any location [section 122.41(i)(4)].

G. Bypass

1. Definitions
 - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [section 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 [section 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 [section 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 [section 122.41(m)(4)(i)]:
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [section 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 [section 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 [*section 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 [*section 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 [*section 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 [*section 122.41(m)(3)(ii)*].

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [*section 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 [*section 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 [*section 122.41(n)(3)*]:
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset [*section 122.41(n)(3)(i)*];
 - b. The permitted facility was, at the time, being properly operated [*section 122.41(n)(3)(ii)*];
 - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b [*section 122.41(n)(3)(iii)*]; and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [*section 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 [*section 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 [section 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 [section 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 [section 122.41(l)(3) and section 122.61].

III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [section 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 [section 122.41(j)(4) and section 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 [section 122.41(j)(2)].
- B. Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements [section 122.41(j)(3)(i)];
 - 2. The individual(s) who performed the sampling or measurements [section 122.41(j)(3)(ii)];
 - 3. The date(s) analyses were performed [section 122.41(j)(3)(iii)];
 - 4. The individual(s) who performed the analyses [section 122.41(j)(3)(iv)];

5. The analytical techniques or methods used [*section 122.41(j)(3)(v)*]; and
6. The results of such analyses [*section 122.41(j)(3)(vi)*].

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

1. The name and address of any permit applicant or Discharger [*section 122.7(b)(1)*]; and
2. Permit applications and attachments, permits and effluent data [*section 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 [*section 122.41(h)*] [*Water Code section 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 Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below [*section 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 [*section 122.22(a)(1)*];
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [*section 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) [section 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 [section 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) [section 122.22(b)(2)]; and
 - c. The written authorization is submitted to the Regional Water Board, State Water Board, or USEPA [section 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, State Water Board or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [section 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” [section 122.22(d)].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the MRP in this Order [section 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 [section 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 [section 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 [section 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 [section 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 [section 122.41(l)(6)(i)].
2. The following shall be included as information that must be reported within 24 hours under this paragraph [section 122.41(l)(6)(ii)]:
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order [section 122.41(l)(6)(ii)(A)].
 - b. Any upset that exceeds any effluent limitation in this Order [section 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 [section 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 [section 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 [section 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) [section 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 section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [*section 122.41(l)(1)(iii)*].

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 [*section 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 [*section 122.41(l)(2)*].

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E [*section 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 [*section 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 CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions [*section 122.41(a)(2)*] [*Water Code sections 13385 and 13387*].

- 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 [*section 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 [*section 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 [*section 122.41(k)(2)*].

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [*section 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" [*section 122.42(a)(1)*]:
 - a. 100 micrograms per liter ($\mu\text{g/L}$) [*section 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 [*section 122.42(a)(1)(ii)*];
 - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*section 122.42(a)(1)(iii)*]; or
 - d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [*section 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" [*section 122.42(a)(2)*]:
 - a. 500 micrograms per liter ($\mu\text{g/L}$) [*section 122.42(a)(2)(i)*];
 - b. 1 milligram per liter (mg/L) for antimony [*section 122.42(a)(2)(ii)*];
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*section 122.42(a)(2)(iii)*]; or
 - d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [*section 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 [*section 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 [*section 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 [*section 122.42(b)(2)*].

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 [*section 122.42(b)(3)*].

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) NO. 6362

The Code of Federal Regulations section 122.48 requires that all NPDES permits specify monitoring and reporting requirements. Water Code 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 [Latitude 33°44'14" North, Longitude 118°15'10" West]) and shall be located where representative samples of that effluent can be obtained.
- B. Effluent samples shall be taken downstream of any addition to treatment works and prior to mixing with the receiving waters.
- C. The Regional Water Board shall be notified in writing of any change in the sampling stations once established or in the methods for determining the quantities of pollutants in the individual waste streams.
- D. Pollutants shall be analyzed using the analytical methods described in sections 136.3, 136.4, and 136.5 (revised March 12, 2007); 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 Public Health 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 Public Health or approved by the Executive Officer and in accordance with current USEPA guideline procedures or as specified in this MRP".
- G. The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), and the Minimum Level (ML) for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported by one of the following methods, as appropriate:
 1. An actual numerical value for sample results greater than or equal to the ML; or
 2. "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML; or,
 3. "Not-Detected (ND)" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used.

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

Current MLs (Attachment H) are those published by the State Water Board in the Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, March 2, 2000.

- 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 H to be included in the Discharger’s permit in any of the following situations:

1. When the pollutant under consideration is not included in Attachment H;
 2. When the Discharger and Regional Water Board agree to include in the permit a test method that is more sensitive than that specified in 40 CFR Part 136 (revised March 12, 2007);
 3. When the Discharger agrees to use an ML that is lower than that listed in Attachment H;
 4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment H, and proposes an appropriate ML for their matrix; or,
 5. When the Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the 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 limit and that limit 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. Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the report.
- 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 and 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 ten percent (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 limits are specified and the monitoring frequency is less than four times a month, the following shall apply. If an analytical result is greater than the average monthly limit, the Discharger shall collect four additional samples at approximately equal intervals during the month, until compliance with the average monthly limit has been demonstrated. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later. In the event of noncompliance with an average monthly effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the average monthly effluent limitation has been demonstrated. The Discharger shall provide for the approval of the Executive Officer a program to ensure future compliance with the average monthly limit.
- 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:

Table E-3. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Shall be located at the entrance of the intake water (prior to sand filter)
001	EFF-001	Shall be located at a point (Discharge 001) prior to receiving water.

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:

Table E-4. Monitoring Station Locations

Parameter	Units	Sample Type	Minimum Sampling Frequency ¹	Required Analytical Test Method
Copper, Total Recoverable	µg/L	Grab	1/ Quarter	2
Mercury	µg/L	Grab	1/ Quarter	2
Chrysene	µg/L	Grab	1/ Quarter	2
Remaining Priority Pollutants ³	µg/L	Grab	1/ Year	2
pH	s.u.	Grab	1/ Year	4,2
Salinity	ppt	Grab	1/ Year	4,2
Temperature	°F	Grab	1/ Year	4,2
Dissolved Oxygen	mg/L	Grab	1/ Year	2

¹ Samples shall be collected at approximately the same time as effluent samples and should be representative of the influent for the period sampled.

² Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP (Attachment H of this permit package), where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

³ Priority Pollutants as defined by the California Toxics Rule (CTR) defined in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment H.

⁴ The water samples for pH, salinity, and temperature must be collected and analyzed at the same time the samples are collected for priority pollutants analysis.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor the aquaria discharge at EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level.

Table E-5. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	s.u.	Grab	1/Month	1
BOD ⁵ 20°C	Mg/L	Grab	1/Quarter	1
Oil and Grease	Mg/L	Grab	1/Quarter	1
Suspended Solids	Mg/L	Grab	1/Quarter	1
Copper, Total Recoverable	µg/L	Grab	1/Quarter	1
Mercury	µg/L	Grab	1/Quarter	1
Chrysene	µg/L	Grab	1/Quarter	1
Remaining Priority Pollutants ²	µg/L	Grab	1/Year	1
Acute Toxicity ³	% survival	Grab	1/every 2 years	1
Chronic Toxicity ³	TUc	Grab	1/every 2 years	1
Ammonia	Mg/L	Grab	1/Quarter	1
Dissolved Oxygen	Mg/L	Grab	1/Month	1
Fecal Coliform	MPN/100 ml	Grab	1/Month	1
Total Coliform	MPN/100 ml	Grab	1/Month	1
Enterococcus	MPN/100 ml	Grab	1/Month	1
Temperature	°F	Grab	1/Month	1
Flow, Total	mgd	⁴	1/Day	1
Nitrate Nitrogen	Mg/L	Grab	1/Quarter	1
Nitrite Nitrogen	Mg/L	Grab	1/Quarter	1
Settleable Solids	ml/L	Grab	1/Quarter	1
Turbidity	NTU	Grab	1/Quarter	1

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP (Attachment H of this permit package), where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

² Priority Pollutants as defined by the California Toxics Rule (CTR) defined in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment H.

³ See section V of the MRP.

⁴ Flow shall be measured using a flow meter.

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%, 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*, Third Edition, October 2002 (EPA/821-R-02-014), or a more recent edition.
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/821-02-014), 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 the MRP 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:**
 - i. 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 TU_c 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

A. Visual Monitoring of Discharge Point

1. A visual observation station shall be established in the vicinity of the discharge point to the receiving water, Fish Harbor (Los Angeles Inner Harbor).
2. General observations of the receiving water shall be made at the 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. BMPP Status and Effectiveness Report

As required under Special Provision VI.C.3 of this Order, the Discharger shall submit a 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 State. 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). In particular, a risk assessment of each area identified by the Discharger shall be performed to determine the potential for hazardous or toxic waste/material discharge to surface waters.

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 toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting, section V.H.

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

Table E-6. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	May 31, 2008	All	May 1 August 1 November 1 February 1
1 / Month	June 1, 2008	1 st day of calendar month through last day of calendar month	May 1 August 1 November 1 February 1
1 / Quarter	June 1, 2008	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	May 31, 2008	January 1 through December 31	February 1

4. The Discharger shall report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in section 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. Where applicable, the Discharger shall include results of receiving water observations.
6. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.
7. 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.
8. 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
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).

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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.

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1 Facility Information

WDID	4B191035001
Discharger	Southern California Marine Institute
Name of Facility	Fish Harbor Laboratory
Facility Address	820 Seaside Avenue
	Terminal Island, California 90731
	Los Angeles County
Facility Contact, Title and Phone	Richard E. Pieper, Ph. D. Director, (310) 519-3176 Ext. 977
Authorized Person to Sign and Submit Reports	Richard E. Pieper, Ph.D. Director, (310) 519-3172 Ext. 977
Mailing Address	820 Seaside Avenue, Terminal Island, California 90731
Billing Address	Same as above
Type of Facility	Marine research laboratory
Major or Minor Facility	Minor
Threat to Water Quality	3
Complexity	C
Pretreatment Program	NA
Reclamation Requirements	NA
Facility Permitted Flow	0.230 Million Gallons Per Day (MGD)
Facility Design Flow	Not applicable
Watershed	Los Angeles County Coastal
Receiving Water	Fish Harbor (Los Angeles Inner Harbor)
Receiving Water Type	Coastal surface water

- A.** Southern California Marine Institute (hereinafter Discharger or SCMI) is the owner and operator of Fish Harbor Laboratory (hereinafter Facility) a marine science research and educational laboratory.

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

- B.** The Facility discharges wastewater to Fish Harbor, a water of the United States and is currently regulated by Order No. 01-152 which was adopted on October 25, 2001, and expired on

September 10, 2006. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements and NPDES permit are adopted pursuant to this Order.

- C. The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on January 25, 2007, and received on January 31, 2007. A site visit was conducted on October 26, 2006, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

The Discharger is the owner and operator of the Fish Harbor Laboratory located 820 South Seaside Avenue, Terminal Island, California. The facility is an open seawater aquaculture system for the study of live marine organisms. The organisms are maintained in holding tanks and aquaria while under study. The SCMI is an organization composed of a consortium of nine local universities. The universities include the Ocean Studies Institute (composed of seven California State Universities), the University of Southern California and its Wrigley Institute for Environmental Studies, and Occidental College's Vantuna Research Group.

A. Description of Wastewater and Treatment

Seawater is pumped from the Los Angeles Fish Harbor (Berth 260), filtered through a sand filter and fed into a series of holding tanks and aquaria, and then discharged back into the harbor. As the water passes through the tanks and aquaria, negligible levels of metabolic wastes from the marine organisms are contributed to the water flow. The sand filter is backwashed for about five minutes per day with about 1,000 gallons of seawater. The wastes discharged to surface water consist of up to 230,000 gpd of filter backwash water and seawater circulated to a series of holding tanks and aquaria. The holding tanks and aquaria wastewater is not treated prior to discharge.

The previous permit authorized the discharge of 150,000 gpd of wastewater. In the ROWD, the Discharger requested to increase the discharge flow rate to a maximum of 230,000 gpd in order to hold large fish in a tank for one to seven days before the fish are transported to large public aquariums.

Due to the nature of the wastewater, discharge the sanitary sewer is restricted.

B. Discharge Points and Receiving Waters

The Facility discharges the aquaria wastewater through Discharge Point 001 (33°, 44', 14" North, 118°, 15', 10" West) into the Fish Harbor which is part of the Los Angeles-Long Beach Inner Harbor (All Other Inner Areas).

The intake water is from the same water body as the receiving water. There are three intake pipes (1, 2, and 3) which are approximately 36 feet, 40 feet, and 43 feet away from Discharge Point 001 (Outfall), respectively, and 10 feet from the bottom of the Harbor. (See Attachment C). The intake pipes are made of polyvinyl chloride (PVC) with 2 inches in diameter and 25 feet in length. The intake pipes are equipped with screens and each is connected to a pump to draw water from the harbor.

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

Effluent Limitations contained in the existing Order for discharges from Discharge Point 001 (Monitoring Location M-001) and representative monitoring data from the term of the previous Order are summarized in Table F-2, below.

Table F-2. Summary of Effluent Limitations (Order No. 01-152) and SMR Reporting (Discharge Point 001)

Parameter (units)	Effluent Limitations					Monitoring Data (From 10/01– To 11/06)
	Annual Mean Minimum	Instantaneous Maximum	Instantaneous Minimum	30-day Average	Maximum Daily	Range of Reported Detected Concentrations
Biochemical Oxygen Demand (BOD ₅ 20°C) (mg/L)	--	--	--	20	60	3 – 80
BOD ₅ 20°C (lbs/day)		--	--	25	75	3.73 – 40.35
Oil and Grease (mg/L)	--	--	--	10	15	0.25 – 1.25
Oil and Grease (lbs/day)	--	--	--	12.5	18.8	0.22 – 2.88
pH (s.u.)	--	8.5	6.5	--	--	6.88 – 8.39
Suspended Solids (mg/L)	--	--	--	50	150	0.8 – 92
Suspended Solids (lbs/day)	--	--	--	62.5	188	1.12 – 70.89
Antimony (µg/L)	--	--	--	--	--	0.016 – 14
Arsenic (µg/L)	--	--	--	--	--	1.1 – 1.54
Beryllium (µg/L)	--	--	--	--	--	0.03
Cadmium (µg/L)	--	--	--	--	--	0.027 – 0.08
Chromium, Trivalent (µg/L)	--	--	--	--	--	0.36 – 0.98
Chromium, Hexavalent (µg/L)	--	--	--	--	--	0.007 – 1.21
Copper (µg/L)	--	--	--	--	--	1.9 – 4.41
Lead (µg/L)	--	--	--	--	--	0.06 – 0.223
Mercury (µg/L)	--	--	--	--	--	0.001 – 0.09
Nickel (µg/L)	--	--	--	--	--	0.262 – 0.67
Selenium (µg/L)	--	--	--	--	--	0.01 – 0.04
Silver (µg/L)	--	--	--	--	--	0.89
Thallium	--	--	--	--	--	0.01
Zinc (µg/L)	--	--	--	--	--	7.51 – 14.15
Cyanide (µg/L)	--	--	--	--	--	0.062
TCDD (µg/L)	--	--	--	--	--	<0.05
Acenaphthene (µg/L)	--	--	--	--	--	0.0257 – 0.046
Acenaphthylene (µg/L)	--	--	--	--	--	0.0035
Anthracene (µg/L)	--	--	--	--	--	0.0079
Benzo(a)Anthracene (µg/L)	--	--	--	--	--	0.0021
Benzo(b)Fluoranthene (µg/L)	--	--	--	--	--	0.0019
Benzo(k)Fluoranthene (µg/L)	--	--	--	--	--	0.0019

Parameter (units)	Effluent Limitations					Monitoring Data (From 10/01– To 11/06)
	Annual Mean Minimum	Instantaneous Maximum	Instantaneous Minimum	30-day Average	Maximum Daily	Range of Reported Detected Concentrations
Bis(2-Ethylhexyl)Phthalate (µg/L)	--	--	--	--	--	0.0194 – 0.813
Butylbenzyl Phthalate (µg/L)	--	--	--	--	--	0.103
Chrysene (µg/L)	--	--	--	--	--	0.002
Diethyl Phthalate (µg/L)	--	--	--	--	--	0.0103 – 0.0547
Di-n-Butyl Phthalate (µg/L)	--	--	--	--	--	0.0167 - 0.0558
Fluoranthene (µg/L)	--	--	--	--	--	0.0398 – 0.0533
Fluorene (µg/L)	--	--	--	--	--	0.0072
Phenanthrene (µg/L)	--	--	--	--	--	0.0071 – 0.0149
Pyrene (µg/L)	--	--	--	--	--	0.0127
Acute Toxicity (% survival)	1					90 – 100
Ammonia (µg/L)	2					0.02 – 0.3
Dissolved Oxygen (mg/L)	7.0	--	5.0	--	--	4.37 – 8.3
Fecal Coliform (MPN/100 mL)	3					2 – 30
Nitrate Nitrogen (µg/L)	--	--	--	--	--	0.02 – 0.08
Nitrite Nitrogen (µg/L)	--	--	--	--	--	0.01
Residual Chlorine (mg/L)	--	--	--	--	--	0.012 – 0.05
Settleable Solids (ml/L)	--	--	--	0.1	0.3	All are ND
Total Coliform (MPN/100 mL)						2 – 50
Total Flow (gpd)	--	--	--	--	0.150	43,200 – 173,189
Temperature (°F ⁵)	4					(-3.2) – 2.7
Turbidity (NTU)	--	--	--	50	150	0.25 – 3

¹ The acute toxicity 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 percent, and (ii) no single test producing less than 70 percent survival.

² Ammonia effluent limitations listed in Attachment 2 of the previous Order (Tables 3-1 through 3-4 in the Basin Plan).

³ A log mean 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.

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

⁵ Value expressed as the difference in °F measured in the effluent and the measured receiving water temperature. A negative (-) value indicates the effluent was cooler than the receiving water.

Table F-2a. Summary of Effluent and Receiving Water Monitoring Data

Date	Effluent	Receiving Water	Effluent	Receiving Water	Effluent	Receiving Water
	Copper	Copper	Mercury	Mercury	Chrysene	Chrysene
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
02/26/02	3.68	--	--	--	--	--
02/20/03	2.16	8.98	0.04	0.03	<0.001	<0.001
05/20/03	2.22	9.4	0.01	0.01	--	--
08/26/03	1.9	4	0.051	0.008	<0.001	0.0877
11/18/03	3.31	9.27	<0.005	<0.005	0.00235	0.0257
02/17/04	4.42	---	<0.005			
11/16/04	2.23	---	ND			
02/15/05	3.58	--	0.001			
02/22/06	2.34	--	<0.005			
Feb-07	2.76	3.38	--			

D. Compliance Summary

Data submitted to the Regional Water Board indicated that the Discharger has exceeded existing permit limitations as outlined in Table F-3 below:

Table F-3. Summary of Compliance History

Date	Monitoring Period	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
2/22/02	2 nd Quarter, 2002	Daily Maximum	BOD ₅ 20°C	80	60	mg/L
2/22/02	2 nd Quarter, 2002	Monthly Average	BOD ₅ 20°C	80	20	mg/L
2/22/02	2 nd Quarter, 2002	Monthly Average	BOD ₅ 20°C	40.35	25	lbs/day
9/23/03	3 rd Quarter, 2003	Minimum Daily	Dissolved Oxygen	4.8	5	mg/L
6/21/05	2 nd Quarter 2005,	Daily Maximum	Flow	173,189	150,000	gpd
11/25/05	4 th Quarter 2005	Minimum Daily	Dissolved Oxygen	4.37	5	mg/L
2/22/06	1 st Quarter, 2006	Monthly Average	Suspended Solids	92	50	mg/L
2/22/06	1 st Quarter, 2006	Monthly Average	Suspended Solids	70.89	62.5	lbs/day

The Facility was inspected once during the permit term (October 26, 2006). The inspector noted that the Facility was incorrectly sampling for flow of once per month, instead of daily as required by the MRP. No other deficiencies were noted during the inspection.

E. Planned Changes

[Not Applicable]

III. APPLICABLE PLANS, POLICIES, AND REGULATION

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 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 (commencing with section 13370). 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, division 7 of the Water Code (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provision of CEQA, Public Resources Code sections 21100 through 21177.

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 Los Angeles Region (hereinafter Basin Plan) on June 13, 1994, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

The Basin Plan at 2-4 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan does not specifically identify beneficial uses for Fish Harbor, but does identify present and potential uses for the Los Angeles-Long Beach Harbor (All Other Inner Areas). Thus, beneficial uses applicable to Fish Harbor are as follows:

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Uses
001	Fish Harbor (Los Angeles Inner Harbor)	<p><u>Existing:</u> Industrial service supply (IND), navigation (NAV), Non-contact water recreation (REC-2), commercial and sport fishing (COMM), marine habitat (MAR), and rare, threatened or endangered species (RARE)¹.</p> <p><u>Potential:</u> Water contact recreation (REC-1), and shellfish harvesting (SHELL).</p>

¹ One or more rare species utilize all oceans, bays, estuaries, and coastal wetlands for foraging and/or nesting.

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

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

While the discharge from the Southern California Marine Institute discharges into the Los Angeles Fish Harbor, within the enclosed bay, the wastewater is comprised primarily of aquaria water filter backwash water, and therefore is not considered to be industrial process wastewater. Nonetheless, this Order contains provisions necessary to protect all beneficial uses of the receiving water.

- 2. 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 State Water Board on July 22, 2004, 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 USEPA’s *“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.”

For inland surface waters not characteristic of freshwater (including enclosed bays, estuaries, and wetlands), the proposed objectives are a 4-day average concentration of unionized ammonia of 0.035 mg/L, and a one-hour average concentration of unionized ammonia of 0.233 mg/L. The proposed objectives are fixed concentrations of unionized ammonia, independent of pH, temperature, or salinity. The proposed amendment includes an implementation procedure to convert un-ionized ammonia objectives to total ammonia effluent limits. The proposed amendment also simplifies the implementation procedures for translating ammonia objectives into effluent limits in situations where a mixing zone has been authorized by the Regional Board. Finally, the proposed amendment revises the implementation procedure for determining saltwater, brackish or freshwater conditions, to be consistent with the proposed objectives. The proposed objectives will apply only to inland surface waters not characteristic of freshwater (including enclosed bays, estuaries and wetlands) and do not impact the Ammonia Water Quality Objectives for ocean waters contained in the California Ocean Plan.

- 3. 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 surface waters. Requirements of the Order implement the Thermal Plan.

- 4. 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.
- 5. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the 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.
- 6. 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 [title 40, Code of Federal Regulations¹ section 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.
- 7. Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.
- 8. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40 CFR 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.

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

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 WLAs for point sources and load allocations (LAs) for non-point sources, as appropriate.

The USEPA approved the State's 2006 303(d) list of impaired water bodies on June 28, 2007. 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 2006 303(d) list and have been scheduled for TMDL development.

The facility discharges directly into Fish Harbor, a part of the Los Angeles-Long Beach Harbor (All Other Inner Areas). The 2006 State Water Board's California 303(d) List classifies the Fish Harbor as impaired. The pollutants of concern include benzo(a)pyrene, benzo(a)anthracene, chlordane, chrysene (C1-C4), copper, dichloro diphenyl trichloroethane (DDT), dibenzo(a,h)anthracene, lead, mercury, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), phenanthrene, pyrene, zinc, and sediment toxicity. To date, only a bacteria TMDL has been developed for the Inner Cabrillo Beach and the Main Ship Channel of the Los Angeles Inner Harbor. The Order prescribes effluent limitations for bacteria based on the Basin Plan that are as stringent as the TMDL bacteria limitations.

E. Other Plans, Polices and Regulations

1. ***Caulerpa taxifolia***. *Caulerpa taxifolia* and other taxa of *Caulerpa* are non-native seaweed species that threaten coastal marine life, including kelp forests and their related fish, marine animals, and sea birds if allowed to become permanently established in the surface waters of the United States. *Caulerpa taxifolia* has the ability to form a dense smothering blanket of growth on any surface (rock, sand, or mud). It is capable of extremely rapid growth - up to one inch per day – and any small fragment of this seaweed has the potential to start a new colony, which can expand to cover more than 75 square feet within one year. It can grow in shallow coastal lagoons as well as in deeper ocean waters, and can reportedly survive for up to ten days out of water. On September 25, 2001, the Secretary of State chaptered Assembly Bill (AB) #1334 regarding *Caulerpa* species as Chapter 338, Statutes of 2001. AB#1334 added section 2300 to the California Fish and Game proscribing limits on possessing and releasing live *Caulperpa* taxa. As an urgency statute, AB#1334 is effective immediately. In light of the Discharger's operations and the nature of its discharge, this Order advises the Discharger of Fish and Game Code section 2300, and requires the Discharger to comply with section 2300's provisions.

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.

The Los Angeles Region has delineated watershed management areas (WMAs) and enumerated significant issues in each WMAs. The significant issues associated with the Los Angeles-Long Beach Harbors WMAs are historic deposits of DDT and PCBs in sediment; discharges from publicly owned treatment works (POTWs) and refineries; spills from ships and industrial facilities; leaching of contaminated groundwater; and historic pesticides and dredged materials. The Discharger is a research marine facility and does not qualify as any of these pollutant sources. In addition, the Discharger does not add any chemicals to the seawater before it is discharged back to the receiving water.

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. Oil and grease may be present due to the use of sumps and other mechanical pumping equipment. Solids are commonly present in aquaculture facilities and therefore, total suspended solids (TSS), settleable solids, 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, pH, fecal coliform, ammonia-nitrogen, dissolved oxygen, temperature, oil and grease, TSS, turbidity, BOD, and settleable solids 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.

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. 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: (1) for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if in establishing technology-based permit limitation on a case-by-case basis limitation 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.

A. Discharge Prohibitions

The discharge prohibitions are based on the requirements of the Basin Plan, State Water Board's plans and policies, the Water Code, and previous permit provisions, and are consistent with the requirements set for other discharges regulated by NPDES permit to Fish 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 controls:

- a. Best practicable treatment control technology (BPT) represents 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) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the “cost reasonableness” of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.
- d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires 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 Code of Federal Regulations authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in section 125.3.

2. Applicable Technology-Based Effluent Limitations

The ELGs for the Concentrated Aquatic Animal Production (CAAP) Point Source Category, published by USEPA, became effective on September 22, 2004. These ELGs, available in 40 CFR Part 451, are applicable to CAAP facilities defined in 40 CFR section 451.2. Based on type and operation, the Facility is not categorized as a CAAP facility requiring application of ELGs. Therefore, the CAAP ELGs available in Part 451 are not applicable to the Facility.

The basis of limitations in the existing permit is based upon the Los Angeles River Basin Plan, the USEPA Water Quality Criteria, and best available technology economically feasible. Effluent limitations in the existing Order (No. 01-152) for turbidity, oil and grease, BOD₅20°C, TSS, and settleable solids were developed using best professional judgment (BPJ) in accordance with section 125.3. The limitations for turbidity, BOD₅20°C, and TSS have been made more stringent than those contained in the existing Order No. 01-152 based on limits established in similar permits issued in the region. The oil and grease and settleable solids effluent limitations have been carried over.

The Discharger is required to develop and implement a Best Management Practices Plan (BMPP). The BMPs are to include schedules of activities, prohibitions of practices, cleaning and maintenance procedures, employee training, treatment methods, etc. that are employed to control discharge of pollutants from the Facility. The BMPs shall address all normal facility operations including, but not limited to: cleaning, feeding, transfer and importation of species, removal of dead species, storage and handling of raw material, and disposal of solid waste. The BMPP 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 and existing Order limitations based on past performance and reflecting BPJ will serve as the equivalent of technology-based effluent limitations, in the absence of established ELGs, in order to carry out the purposes and intent of the CWA. 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

Pollutant	Unit	Effluent Limitations	
		Average Monthly	Maximum Daily
BOD ⁵ 20°C	mg/L	20	30
	lbs/day	38	58
Oil and Grease	mg/L	10	15
	lbs/day	19	29
Suspended Solids	mg/L	50	75
	lbs/day	96	144
Turbidity	NTU	50	75
Settleable Solids	ml/L	0.1	0.3

¹ Based on a maximum flow of 0.230 MGD.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

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

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

The specific procedures for determining reasonable potential for discharges from the Facility, and if necessary for calculating WQBELs, are contained in the SIP.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

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

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

Table F-6 summarizes the applicable water quality criteria/objective for priority pollutants reported in detectable concentrations in the effluent or receiving water. These criteria were used in conducting the RPA for this Order.

Table F-6. Applicable Water Quality Criteria

CTR No.	Constituent	Selected Criteria µg/L	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
1	Antimony	4300			--	--		4300
2	Arsenic	36.00			69.00	36.00		--
3	Beryllium	--			--	--		--
4	Cadmium	9.36			42.25	9.36		--
5a	Chromium (III)				--	--		--
5b	Chromium (VI)	50.35			1,107.75	50.35		--
6	Copper	3.73			5.78	3.73		--
7	Lead	8.52			220.82	8.52		--
8	Mercury	0.051			Reserved	Reserved		0.051
9	Nickel	8.28			74.75	8.28		4,600
10	Selenium	71.14			290.58	71.14		--
11	Silver	2.24			2.24	--		--
12	Thallium	6.3			----			6.3
13	Zinc	85.62			95.14	85.62		--
14	Cyanide	1			1.00	1.00		220,000
56	Acenaphthene	2,700			--	--		2,700
57	Acenaphthylene	--			--	--		--
58	Anthracene	110,000	N/A		--	--	N/A	110,000
60	Benzo(a)Anthracene	0.049			--	--		0.049
61	Benzo(a)Pyrene	0.049			--	--		0.049
62	Benzo(b)Fluoranthene	0.049			--	--		0.049
63	Benzo(ghi)Perylene	--			--	--		--
64	Benzo(k)Fluoranthene	0.049			--	--		0.049
68	Bis(2-Ethylhexyl)Phthalate	5.9			--	--		5.9
70	Butylbenzyl Phthalate	5,200			--	--		5,200
73	Chrysene	0.049			--	--		0.049
79	Diethyl Phthalate	120,000			--	--		120,000
81	Di-n-Butyl Phthalate	12,000			--	--		12,000
86	Fluoranthene	370			--	--		370
87	Fluorene	14,000			--	--		14,000
92	Indeno(1,2,3-cd)Pyrene	0.049			--	--		0.049
94	Naphthalene	--			--	--		--
99	Phenanthrene	--			--	--		--
100	Pyrene	11,000			--	--		11,000

"N/A" indicates the receiving water body is not characterized as freshwater, nor are the water quality criteria for the protection of human health for the consumption of water and organisms applicable.

3. Determining the Need for WQBELs

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

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

- 1) Trigger 1 – If the $MEC \geq C$, a limit is needed.
- 2) Trigger 2 – If the background concentration (B) > C and the pollutant is detected in the effluent, a limit is needed.
- 3) 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 RPA was performed for the priority pollutants regulated in the CTR for which data are available. Eight sets of metals discharge data and four sets of data for the remaining priority pollutants are available for Discharge Point 001 and the receiving water. Based on the RPA, pollutants that demonstrate reasonable potential are copper, and mercury for discharge through Discharge Point 001. There is insufficient data to determine reasonable potential for chrysene. Therefore, the Discharger is required to monitor chrysene in the effluent and receiving water. Refer to Attachment I for a summary of the RPA and associated effluent limitation calculations.

Table F-7. Summary Reasonable Potential Analysis

CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
		µg/L	µg/L	µg/L		
1	Antimony	4,300	14	0.16	No	MEC & B <C
2	Arsenic	36.00	1.54	1.67	No	MEC & B <C
3	Beryllium	9.36	0.03	0.06	No	MEC & B <C
4	Cadmium	42.25	0.08	0.078	No	MEC & B <C
5a	Chromium (III)	--	0.98	0.46	No	No C
5b	Chromium (VI)	50.35	1.21	1.07	No	MEC & B <C
6	Copper	3.73	4.41	9.27	Yes	MEC & B >C
7	Lead	8.52	0.223	4.68	No	MEC & B <C
8	Mercury	0.051	0.051	0.03	Yes	MEC=C
9	Nickel	8.28	0.67	0.64	No	MEC & B <C
10	Selenium	71.14	0.04	0.2	No	MEC & B <C
11	Silver	2.24	0.89	0.71	No	MEC & B <C
12	Thallium	6.3	0.01	0.02	No	MEC & B <C
13	Zinc	85.62	14.15	20.8	No	MEC & B <C
14	Cyanide	1	0.062	0.123	No	MEC & B <C
56	Acenaphthene	2,700	0.0460	0.132	No	MEC & B <C
57	Acenaphthylene	--	0.0035	0.0083	No	No C
58	Anthracene	110,000	0.0079	0.108	No	MEC & B <C
60	Benzo(a)Anthracene	0.043	0.0021	0.0097	No	MEC & B <C
61	Benzo(a)Pyrene	0.049	All ND	0.0027	No	MEC & B <C
62	Benzo(b)Fluoranthene	0.049	0.0019	0.0071	No	MEC & B <C
63	Benzo(ghi)Perylene	--	All ND	0.0011	No	No C
64	Benzo(k)Fluoranthene	0.049	0.0019	0.0075	No	MEC & B <C
68	Bis(2-Ethylhexyl)Phthalate	5.9	0.813	4.49	No	MEC & B <C
70	Butylbenzyl Phthalate	5,200	0.103	0.0104	No	MEC & B <C
73	Chrysene	0.049	0.00235	0.0877	No	B>C and detected in effluent once
79	Diethyl Phthalate	120,000	0.0547	0.0659	No	MEC & B <C
81	Di-n-Butyl Phthalate	12,000	0.0558	0.0713	No	MEC & B <C
86	Fluoranthene	370	0.0533	0.287	No	MEC & B <C
87	Fluorene	14,000	0.0072	0.0488	No	MEC & B <C
92	Indeno(1,2,3-cd) Pyrene	0.049	All ND	0.001	No	MEC & B <C
94	Naphthalene	--	All ND	0.0364	No	No C
99	Phenanthrene	--	0.0149	0.15	No	No C
100	Pyrene	11,000	0.0127	0.102	No	MEC & B <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:
 - (1) If applicable and available, use of the wasteload allocation (WLA) established as part of a total maximum daily load (TMDL).
 - (2) Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).
 - (3) Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Regional Water Board.
 - (4) Establish effluent limitations that consider intake water pollutant concentrations, in accordance to Section 1.4.4.
- b. Water quality based effluent limits (final) for mercury are based on monitoring results and following the procedure based on the steady-state model, available in Section 1.4 of the SIP.
- c. Since many of the streams in the Region have minimal upstream flows, mixing zones and dilution credits are usually not appropriate. Therefore, in this tentative Order, no dilution credit is being allowed. However, in accordance with the reopener provision in Section VI.C.1.e in the tentative Order, this Order may be reopened upon the submission by the Discharger of adequate information to establish appropriate dilution credits or a mixing zone, as determined by the Regional Water Board.
- d. WQBELs Calculation Example

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

Concentration-Based Effluent Limitations

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 the most restrictive MDEL are selected as the WQBEL.

Since mercury has no aquatic life criteria, the AMEL and MDEL are based on the human health criteria.

Calculation of aquatic life AMEL and MDEL:

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

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

Where C = The priority pollutant criterion/objective, adjusted if necessary

for hardness, pH and translators. In this Order there are no hardness-dependant criteria; further, a pH of 7.9 was used for pH-dependant criteria.

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

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

$$ECA = C$$

For mercury the applicable water quality criteria (human health criteria) is (reference as Table F-6):

$$ECA_{\text{human health}} = 0.051 \mu\text{g/L}$$

Step 2: For the ECA based on human health, set the AMEL equal to the $ECA_{\text{human health}}$

$$AMEL_{\text{human health}} = ECA_{\text{human health}} = 0.051 \mu\text{g/L}$$

Step 3: *Calculation of human health AMEL and MDEL (Go to Step 4)*

Step 4: For the ECA based on human health, set the AMEL equal to the $ECA_{\text{human health}}$

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

For mercury: $AMEL_{\text{human health}} = ECA_{\text{human health}} = 0.051 \mu\text{g/L}$

Step 5: Calculate the MDEL for human health by multiplying the AMEL by the ratio of the $Multiplier_{\text{MDEL}}$ to the $Multiplier_{\text{AMEL}}$. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

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

For mercury: $MDEL_{\text{human health}} = 0.051 \times 2.01 = 0.102$

Step 6: The AMEL and MDEL based on human health are:

For mercury:

$AMEL_{\text{human health}}$	$MDEL_{\text{human health}}$
0.051 $\mu\text{g/L}$	0.102 $\mu\text{g/L}$

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 RWQCB, SWRCB, and U.S. EPA;
- (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 monitoring data (Table F-2a), and the additional information submitted, 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 (9.4 µg/L) exceeds the most stringent applicable (CTR) criteria for copper which is 3.73 µg/L. There is no TMDL for copper for the Los Angeles Inner Harbor. However, copper is included in the 303(d) list of constituents in Los Angeles Harbor and a TMDL is scheduled for 2009. When a TMDL is developed for copper in the Los Angeles Harbor, the TMDL based effluent limitation will be implemented through a reopener. The intake water is from the same water body as the receiving water. Further, the reported effluent concentrations are less than the receiving water concentrations for copper.

The Discharger has demonstrated that the above conditions required to provide intake credits for a discharge are satisfied for copper. Therefore, this Order includes effluent limitations for copper based on the intake water credits. There are insufficient data to perform a meaningful statistical analysis to develop intake water credits. 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. Therefore, the effluent limitation for copper is established based on the reported maximum receiving water concentration of 9.4 µg/L.

5. WQBELs based on Basin Plan Objectives

The Basin Plan states that the discharge shall not cause the following in Fish Harbor (Los Angeles Inner Harbor):

- 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.

6. Final WQBELs

Summaries of the WQBELs are described in Table F-8.

Table F-8. Summary of Water Quality-based Effluent Limitations: Discharge Point 001

Parameter	Units	Effluent Limitations				
		Average Monthly	Mean Annual	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	s.u.	--	--	--	6.5	8.5
Temperature	°F	---	86	---	---	---
Copper	µg/L	--	--	9.4	--	--
	lbs/day	--	--	18	--	--
Mercury	µg/L	0.05	--	0.10	--	--
	lbs/day	0.0001	--	0.0002	--	--

- 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. There shall be no acute or chronic toxicity in the discharge of low volume waste. The acute toxicity of the effluent shall be such that the average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least ninety percent (90%) and no single test producing less than 70% survival. Compliance with the toxicity objectives will be determined by the method described in MRP in Attachment E.
- d. **Ammonia.** Total un-ionized ammonia (NH₃) water quality objectives of 0.035 mg/L for the 4-day average and 0.233 mg/L for the 1-hour average. These values are to be translated utilizing the implementation procedure included in Resolution No. 2004-022 which revised the saltwater ammonia water quality objectives in the 1994 Basin Plan.

The implementation procedure requires:

1. Determine the downstream applicable water quality objectives for ammonia for the 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:

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

Where: P = 1 atm

T = temperature (°K)

$pK_a^s = 0.116 \cdot l + 9.425$, the stoichiometric acid hydrolysis constant of ammonium ions in saltwater based on i

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

S = salinity

(Per USEPA Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989)

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 while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses by aquatic organisms. Detrimental 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 existing Order contains acute toxicity limitations and monitoring requirements in accordance with the Basin Plan at 3-17, 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. Annual acute toxicity data for the years 2001 through 2006 submitted by the Discharger showed 90 - 100 percent survival rates. Consistent with Basin Plan requirements, this Order carries over the acute toxicity limitations from the previous Order. To determine compliance with these requirements, the Order requires the Discharger to monitor for acute toxicity once every two years.

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. The discharge composed entirely of filter backwash water and aquaria wastewater and is a continuous discharge. Therefore, in accordance with the SIP, this Order requires the Discharger to conduct chronic toxicity testing on the effluent discharged through Discharge Point 001 once every two years.

D. Final Effluent Limitations

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 based on the submitted sampling data. Effluent limitations for pH, fecal coliform, dissolved oxygen, oil and grease, settleable solids and acute toxicity are being carried over from the previous Order (Order No. 00-152). The existing effluent limitations for turbidity, BOD₅20°C and TSS were made more stringent based on similar permits issued in the region. 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.

Effluent limitations for temperature have been revised to reflect WQO changes in the Basin Plan and Thermal Plan. In addition, the effluent limitations for copper and mercury have been added to this Order because the Facility’s discharge was found to have reasonable potential to exceed water quality criteria for these parameters.

The existing Order, section I.B.3, contains effluent limitations for ammonia 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.

1. Satisfaction of Anti-Backsliding Requirements

All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

2. Satisfaction of Antidegradation Policy

The discharge from this facility is not a new discharge. Further, it is comprised of filter backwash water and aquaria effluent; the facility operates to maintain aquatic life. This NPDES permit includes effluent limits to ensure that the discharge does not adversely impact the beneficial uses of the receiving waters or degrade water quality. The inclusion of the effluent limits and prohibitions in the NPDES permit, which ensure that any discharge would not result in the lowering of water quality, support the conclusion that no degradation will arise as a result of reissuing this permit. The issuance of this permit, therefore, is consistent with the state's antidegradation policy.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on turbidity, BOD₅20°C, total suspended solids, oil and grease, and settleable solids. Restrictions on turbidity, BOD₅20°C, total suspended solids, oil and grease, and settleable solids are discussed in section IV.B of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations 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 for priority pollutants 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 requirements of the CWA.

4. Mass-based Effluent Limitations

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

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

where:

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

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

Flow rate = discharge flow rate (MGD)

5. Final Effluent Limitations

- a. The discharge of filter backwash and aquaria wastewater maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location M-001 as described in the attached MRP (Attachment E):

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

Parameter	Units	Effluent Limitations				Basis
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
BOD@ 20 °C	mg/L	20	30	--	--	Previous Order ² and BPJ ³
	lbs/day ¹	38	58	--	--	
Oil and Grease	µg/L	10	15	--	--	Previous Order ²
	lbs/day ¹	19	29	--	--	
pH	s.u.	--	--	6.5	8.5	Previous Order ²
TSS	mg/L	50	75	--	--	Previous Order ² and BPJ ³
	lbs/day ¹	96	144	--	--	
Copper	µg/L	--	9.4	--	--	SIP ⁴ / Intake Credit ⁵
	lbs/day ¹	--	18	--	--	
Mercury	µg/L	0.05	0.10	--	--	CTR/SIP ⁴
	lbs/day ¹	0.0001	0.0002	--	--	
Settleable Solids	ml/l	0.1	0.3	--	--	Previous Order ³
Turbidity	NTU	50	75	--	--	Previous Order and BPJ ²
Temperature	°F	---	86	---	---	Thermal Plan

¹ Based on a flow of 230,000 gpd.

² These effluent limitations have been carried over from the existing Order (No. 01-152) to comply with anti-backsliding regulations.

³ Based on best professional judgment (BPJ) in accordance with 40 CFR Section 125.3.

⁴ These effluent limitations are established based on the California Toxics Rule (CTR) and the State Implementation Policy (SIP).

⁵ Based on Section 1.4.4 of the SIP – Intake Credits.

- 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. There shall be no acute toxicity in the discharge of low volume waste. The acute toxicity of the effluent shall be such that the average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least ninety percent (90%) and no single test producing less than 70% survival. Compliance with the toxicity objectives will be determined by the method described in MRP in Attachment E.
- e. **Ammonia.** Total un-ionized ammonia (NH₃) water quality objectives of 0.035 mg/L for the 4-day average and 0.233 mg/L for the 1-hour average. These values are to be translated utilizing the implementation procedure included in Resolution No. 2004-022 which revised the saltwater ammonia water quality objectives in the 1994 Basin Plan.

The implementation procedure requires:

- 1. Determine the downstream 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:

$$[NH_4^+] + [NH_3] = [NH_3] + [NH_3] * 10^{(pK_a^s + 0.0324(298 - T) + 0.0415 P/T - pH)}$$

Where: P = 1 atm

T = temperature (°K)

$pK_a^s = 0.116 * I + 9.425$, the stoichiometric acid hydrolysis constant of ammonium ions in saltwater based on i

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

S = salinity

(Per USEPA Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989)

E. Land Discharge Specifications

[Not Applicable]

F. 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 this 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 that all NPDES permits to specify recording and reporting of monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (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/Intake Water Monitoring

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, mercury, and chrysene once per quarter and the remaining priority pollutants once per year to provide data for the Regional Water Board to consider intake water credits when establishing WQBELs. Priority pollutants as defined by the CTR described in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment I. Since the intake water is the same as the receiving water, it will also be used to evaluate the receiving water conditions. Monitoring for ph, salinity, and temperature once per year is required to provide data to conduct reasonable potential analysis for the priority pollutants. Monitoring for pH, temperature, and dissolved oxygen (once per year) are also required to determine compliance with the receiving water limitations.

B. Effluent Monitoring

Monitoring for those pollutants that may be expected to be present in the effluent at Monitoring Location M-001 through Discharge Point 001 will be required as shown on the proposed MRP. To determine compliance with effluent limitations, the proposed monitoring plan carries forward monitoring requirements from previous Order No. 01-152 with some modifications. In the proposed permit, monitoring requirements for temperature, pH, dissolved oxygen, fecal coliform, total coliform, suspended solids, settleable solids, BOD₅20°C, oil and grease, turbidity, residual chlorine, ammonia, nitrate nitrogen, and nitrite nitrogen are carried over from the previous permit. The monitoring frequency for copper and mercury are established at quarterly in order to determine compliance with new effluent limitations.

In addition, according to the SIP, the Discharger is required to monitor the effluent for the remaining CTR priority pollutants, to determine reasonable potential. Accordingly, the Regional Water Board is requiring that the Discharger conduct annual effluent monitoring of the remaining CTR priority pollutants, except chrysene which is required quarterly.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. This Order includes limitations for acute toxicity, and therefore, monitoring requirements are included in the MRP to determine compliance with the effluent limitations established in Limitations and Discharge Requirements, Effluent Limitations, Section IV.A.1.a. The acute toxicity monitoring is required once every two years.

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. The discharge composed entirely of filter backwash water and aquaria wastewater and is a continuous discharge. Therefore, in accordance with the SIP, chronic toxicity testing is required once every two years. 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. Receiving Water Monitoring

1. Surface Water

This Order includes receiving water limitations established in Limitations and Discharge Requirements, Receiving Water Limitations, Section V.A. As mentioned above, the intake water is the same as the receiving water. Therefore, monitoring for temperature, pH, and dissolved oxygen in the intake water is included in the proposed Order. 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

[Not Applicable]

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions

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

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

2. Regional Water Board Standard Provisions

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

B. Special Provisions

1. Reopener Provisions

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

2. Special Studies and Additional Monitoring Requirements

- a. Acute and Chronic Toxicity Trigger. This provision is based on section 4 of the SIP, Toxicity Control Provisions.

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

3. Best Management Practices and Pollution Prevention

This provision is based on section 122.44(k) and includes the requirement to develop a 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 Fish 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 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 section 122.41(e) and the previous Order.

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 waste discharge requirements (WDRs) that will serve as a National Pollution Discharge Elimination System (NPDES) permit for Southern California Marine Institute. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. 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.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative 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 should be received at the Regional Water Board offices by 5:00 p.m. on February 7, 2008.

C. Public Hearing

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

Date: May 1, 2008
Time: 9:00 A.M.
Location: Metropolitan Water District, Board Room
700 N. Alameda Street,
Los Angeles, California

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, 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 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 February 7, 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 June 5, 2008. A continuance will not extend any time set forth herein.

H. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

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 (ROWD), related documents, tentative 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 Rosario Aston at (213) 576-6653.

ATTACHMENT H– STATE WATER BOARD MINIMUM LEVELS (ML)

The Minimum Levels (MLs) in ppb ($\mu\text{g/L}$) 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 State Water Board and become effective. The following tables (Tables 2a - 2d) present MLs for four major chemical groupings: volatile substances, semi-volatile substances, inorganics, and pesticides and PCBs.

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

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

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

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

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

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

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

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

Table 2d – PESTICIDES – 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

Table 2d – PESTICIDES – PCBs*	GC
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

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

Techniques:

GC - Gas Chromatography

GCMS - Gas Chromatography/Mass Spectrometry

HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)

LC - High Pressure Liquid Chromatography

FAA - Flame Atomic Absorption

GFAA - Graphite Furnace Atomic Absorption

HYDRIDE - Gaseous Hydride Atomic Absorption

CVAA - Cold Vapor Atomic Absorption

ICP - Inductively Coupled Plasma

ICPMS - Inductively Coupled Plasma/Mass Spectrometry

SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)

DCP - Direct Current Plasma

COLOR – Colorimetric

ATTACHMENT I – PRIORITY POLLUTANTS

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
1	Antimony	7440360	†
2	Arsenic	7440382	†
3	Beryllium	7440417	†
4	Cadmium	7440439	†
5a	Chromium (III)	16065831	†
5a	Chromium (VI)	18540299	†
6	Copper	7440508	†
7	Lead	7439921	†
8	Mercury	7439976	†
9	Nickel	7440020	†
10	Selenium	7782492	†
11	Silver	7440224	†
12	Thallium	7440280	†
13	Zinc	7440666	†
14	Cyanide	57125	†
15	Asbestos	1332214	†
16	2,3,7,8-TCDD	1746016	†
17	Acrolein	107028	†
18	Acrylonitrile	107131	†
19	Benzene	71432	†
20	Bromoform	75252	†
21	Carbon Tetrachloride	56235	†
22	Chlorobenzene	108907	†
23	Chlorodibromomethane	124481	†
24	Chloroethane	75003	†
25	2-Chloroethylvinyl Ether	110758	†
26	Chloroform	67663	†
27	Dichlorobromomethane	75274	†
28	1,1-Dichloroethane	75343	†
29	1,2-Dichloroethane	107062	†
30	1,1-Dichloroethylene	75354	†
31	1,2-Dichloropropane	78875	†
32	1,3-Dichloropropylene	542756	†
33	Ethylbenzene	100414	†
34	Methyl Bromide	74839	†
35	Methyl Chloride	74873	†
36	Methylene Chloride	75092	†
37	1,1,2,2-Tetrachloroethane	79345	†
38	Tetrachloroethylene	127184	†
39	Toluene	108883	†
40	1,2-Trans-Dichloroethylene	156605	†
41	1,1,1-Trichloroethane	71556	†
42	1,1,2-Trichloroethane	79005	†
43	Trichloroethylene	79016	†
44	Vinyl Chloride	75014	†
45	2-Chlorophenol	95578	†
46	2,4-Dichlorophenol	120832	†
47	2,4-Dimethylphenol	105679	†
48	2-Methyl-4,6-Dinitrophenol	534521	†

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
49	2,4-Dinitrophenol	51285	
50	2-Nitrophenol	88755	
51	4-Nitrophenol	100027	
52	3-Methyl-4-Chlorophenol	59507	
53	Pentachlorophenol	87865	
54	Phenol	108952	
55	2,4,6-Trichlorophenol	88062	
56	Acenaphthene	83329	
57	Acenaphthylene	208968	
58	Anthracene	120127	
59	Benzidine	92875	
60	Benzo(a)Anthracene	56553	
61	Benzo(a)Pyrene	50328	
62	Benzo(b)Fluoranthene	205992	
63	Benzo(ghi)Perylene	191242	
64	Benzo(k)Fluoranthene	207089	
65	Bis(2-Chloroethoxy)Methane	111911	
66	Bis(2-Chloroethyl)Ether	111444	
67	Bis(2-Chloroisopropyl)Ether	108601	
68	Bis(2-Ethylhexyl)Phthalate	117817	
69	4-Bromophenyl Phenyl Ether	101553	
70	Butylbenzyl Phthalate	85687	
71	2-Chloronaphthalene	91587	
72	4-Chlorophenyl Phenyl Ether	7005723	
73	Chrysene	218019	
74	Dibenzo(a,h)Anthracene	53703	
75	1,2-Dichlorobenzene	95501	
76	1,3-Dichlorobenzene	541731	
77	1,4-Dichlorobenzene	106467	
78	3,3'-Dichlorobenzidine	91941	
79	Diethyl Phthalate	84662	
80	Dimethyl Phthalate	131113	
81	Di-n-Butyl Phthalate	84742	
82	2,4-Dinitrotoluene	121142	
83	2,6-Dinitrotoluene	606202	
84	Di-n-Octyl Phthalate	117840	
85	1,2-Diphenylhydrazine	122667	
86	Fluoranthene	206440	
87	Fluorene	86737	
88	Hexachlorobenzene	118741	
89	Hexachlorobutadiene	87863	
90	Hexachlorocyclopentadiene	77474	
91	Hexachloroethane	67721	
92	Indeno(1,2,3-cd)Pyrene	193395	
93	Isophorone	78591	
94	Naphthalene	91203	
95	Nitrobenzene	98953	
96	N-Nitrosodimethylamine	62759	
97	N-Nitrosodi-n-Propylamine	621647	
98	N-Nitrosodiphenylamine	86306	
99	Phenanthrene	85018	
100	Pyrene	129000	

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
101	1,2,4-Trichlorobenzene	120821	
102	Aldrin	309002	
103	alpha-BHC	319846	
104	beta-BHC	319857	
105	gamma-BHC	58899	
106	delta-BHC	319868	
107	Chlordane	57749	
108	4,4'-DDT	50293	
109	4,4'-DDE	72559	
110	4,4'-DDD	72548	
111	Dieldrin	60571	
112	alpha-Endosulfan	959988	
113	beta-Endosulfan	33213659	
114	Endosulfan Sulfate	1031078	
115	Endrin	72208	
116	Endrin Aldehyde	7421934	
117	Heptachlor	76448	
118	Heptachlor Epoxide	1024573	
119	PCB-1016	12674112	
120	PCB-1221	11104282	
121	PCB-1232	11141165	
122	PCB-1242	53469219	
123	PCB-1248	12672296	
124	PCB-1254	11097691	
125	PCB-1260	11096825	
126	Toxaphene	8001352	

¹ Pollutants shall be analyzed using the methods described in 40 CFR Part 136.

Attachment J – Summary of Reasonable Potential Analysis