CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ORDER NO. 2001-237
NPDES PERMIT NO. CA0109355

WASTE DISCHARGE REQUIREMENTS

FOR

HUBBS-SEAWORLD
RESEARCH INSTITUTE

LEON RAYMOND HUBBARD, JR.
MARINE FISH HATCHERY

AGUA HEDIONDA LAGOON

SAN DIEGO COUNTY

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October 10, 2001

The California Regional Water Quality Control Board, San Diego Region, (hereinafter Regional Board), finds that:

1. The *Hubbs-SeaWorld Research Institute, Leon Raymond, Jr. Marine Fish Hatchery,* (hereinafter discharger) is located at 4200 Garfield Street, Carlsbad, California and is along the north shore of the *Agua Hedionda Lagoon* in the *Los Monos Hydrologic Subarea* (904.31) of the *Agua Hedionda Hydrologic Unit* (904.00).

2. On June 1, 1994, this Regional Board adopted Monitoring and Reporting Program (MRP) No. 94-79 for the discharger. Pursuant to 40 CFR 122.24, Appendix C, *Criteria for Determining a Concentrated Aquatic Animal Production Facility* the discharge from the facility did not meet the criteria for a National Pollutant Discharge Elimination System (NPDES) permit. Since 1994 the discharger has discharged its filter backwash water to the sanitary sewer. Therefore, the MRP was adopted without Waste Discharge Requirements (WDR) or an NPDES permit.

3. On April 3, 2001, the discharger submitted a *Report of Waste Discharge* (RWD) for a proposed change in the discharge from its Carlsbad facility. Because the proposed changes to the operations at its facility will cause a material change in the character of the waste stream being discharged, Waste Discharge Requirements (WDR) are being recommended for the Carlsbad facility.

3. The proposed discharge from the facility will consists of seawater that is used to produce native marine species such as white seabass, California halibut, and giant seabass, and the backwash water from the rapid sand filters used to filter the seawater. The marine species are produced for the enhancement of commercially and recreationally important fishery populations.

4. The proposed discharge flow rate will have a maximum monthly average rate of 1.73 million gallons per day (MGD). The proposed discharge will originate from the seawater that is taken from the Agua Hedionda Lagoon. A line diagram of the proposed processes and facility operations is included in *Attachment A*.

5. On March 2, 2000, the State Water Resources Control Board (State Board) adopted the *Policy for Implementation of Toxics Standard for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Phase I of the Inland Surface Waters Plan and the Enclosed Bays and Estuaries Plan) 2000* (Implementation Policy). The Implementation Policy

implements the provisions promulgated by the U.S. Environmental Protection Agency (USEPA) in the California Toxics Rule (CTR), 40 CFR 131.38. Water quality criteria for 126 priority pollutants are established by the CTR.

6. This Order contains monitoring requirements established by the Implementation Policy. If the monitoring data collected pursuant to the Implementation Policy or to this Order indicates that water quality-based effluent limitations are necessary, this Order shall be reopened to establish water quality-based limitations.

7. The State Board adopted a *Water Quality Control Policy for Enclosed Bays and Estuaries of California* (*Bays and Estuaries Policy*) on May 16, 1974. The *Bays and Estuary Policy* establishes principles for management of water quality, quality requirements for waste discharges, discharge prohibitions, and general provisions to prevent water quality degradation and to protect the beneficial uses of waters of enclosed bays and estuaries. These principles, requirements, prohibitions, and provisions have been incorporated into this Order.

8. The *Bays and Estuaries Policy* contains the following principle for management of water quality in enclosed bays and estuaries, which includes Aqua Hedionda Lagoon:

   The discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries 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. For the purpose of this policy, treated ballast waters and innocuous nonmunicipal wastewater such as clear brines, washwater, and pool drains are not necessarily considered industrial process wastes, and may be allowed by Regional Boards under discharge requirements that provide protection to the beneficial uses of the receiving water.

   For the purpose of the *Bays and Estuaries Policy* and this Order, the discharge of seawater used to produce native marine species will be considered innocuous nonmunicipal wastewaters and, as such, will not be considered industrial process wastes. Therefore, the discharges of such wastes may be allowed by this Regional Board under waste discharge

requirements that provide protection of the beneficial uses of the receiving waters.

9. The following *Principles for the Management of Water Quality in Enclosed Bays and Estuaries*, as stated in *the Bays and Estuaries Policy*, apply to all of California's enclosed bays and estuaries including Aqua Hedionda Lagoon:

   a. *Persistent or cumulative toxic substances shall be removed from the waste to the maximum extent practicable through source control or adequate treatment prior to discharge.*

   b. *Bay or estuarine outfall and diffuser systems shall be designed to achieve the most rapid initial dilution practicable to minimize concentrations of substances not removed by source control or treatment.*

   c. *Wastes shall not be discharged into or adjacent to areas where the protection of beneficial uses requires spatial separation from waste fields.*

   d. *Waste discharges shall not cause a blockage of zones of passage required for the migration of anadromous fish.*

   e. *Nonpoint sources of pollutants shall be controlled to the maximum practicable extent.*

   This Regional Board has considered the *Principles for the Management of Water Quality in Enclosed Bays and Estuaries*, in adopting this Order. The terms and conditions of this Order are consistent with the *Principles for the Management of Water Quality in Enclosed Bays and Estuaries*.

10. The *Water Quality Control Plan, San Diego Basin (9)* (Basin Plan) was adopted by this Regional Board on September 8, 1994; and, was subsequently approved by the State Board on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by this Regional Board and approved by the State Board. The Basin Plan designates beneficial uses and establishes narrative and numerical water quality objectives, and prohibitions which are applicable to the discharges regulated under this Order.

11. The Basin Plan (p. 2-47, Table 2-3. Beneficial Uses of Coastal Waters) established the following beneficial uses for the waters of Agua Hedionda Lagoon:

   a. Industrial Service Supply

b. Navigation
c. Contact Water Recreation
d. Non-contact Water Recreation
e. Commercial and Sport Fishing
f. Estuarine Habitat
g. Wildlife Habitat
h. Rare, Threatened, or Endangered Species
i. Marine Habitat
j. Aquaculture
k. Migration of Aquatic Organisms
l. Shellfish Harvesting

12. The Basin Plan established narrative water quality objectives for the following parameters in order to protect the beneficial uses of inland surface waters, enclosed bays and estuaries, coastal lagoons, and ground waters:

a. Physical characteristics;
b. Biological characteristics;
c. Bacteria;
d. Toxicity;
e. Chemical characteristics; and,
f. Radioactivity.

13. The Basin Plan includes the following narrative as a water quality objective, which is applicable to the discharge:

Water Quality Objectives for Toxicity:

All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the Regional Board.

The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge or, when necessary, for other control water that is consistent with requirements specified in U.S. EPA, State Water Resources Control Board or other protocol authorized by the Regional Board. As a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour acute bioassay.

In addition, effluent limits based upon acute bioassays of effluents will be prescribed where appropriate, additional numerical receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances will be encouraged.

14. To ensure the protection of beneficial uses of the Aqua Hedionda Lagoon, toxicity requirements and monitoring requirements are included in this Order.

15. The Basin Plan includes the following narrative as a water quality objective, which is applicable to the discharge:

    Inland surface waters, bays and estuaries and coastal lagoon waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses.

16. Pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (collectively "antidegradation policies"), this Regional Board has determined that an antidegradation analysis is not necessary since this Order protects existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

17. Effluent limitations, and inland surface waters criteria, and enclosed bays and estuaries criteria established under Sections 301, 302, 303(d), 304, 306, and 402 of the CWA, as amended (33 U.S.C. 1251 et seq.), are applicable to the discharge.

18. For the purposes of this Order, "waste" includes the discharger's total discharge, of whatever origin, i.e. gross, not net, discharge.

19. For the purposes of this Order, the term "permittee" used in parts of Title 40, Code of Federal Regulations (40 CFR) incorporated into this Order by reference and/or applicable to this Order shall have the same meaning as the term "discharger" used elsewhere in this Order.

20. This Order shall serve as NPDES Waste Discharge Requirements for the discharge of seawater used to produce marine species to the Aqua Hedionda Lagoon pursuant to Section 402 of the CWA, and amendments thereto.

21. This Regional Board, in establishing the requirements contained herein, considered factors including, but not limited to, the following:

    a. Beneficial uses to be protected and the water quality objectives reasonably required for that purpose;

    b. Other waste discharges;

    c. The need to prevent nuisance;

    d. Past, present, and probable future beneficial uses of the Aqua Hedionda Lagoon waters under consideration;

    e. Environmental characteristics of the Aqua Hedionda Lagoon waters under consideration;

    f. Water quality conditions that could reasonably be achieved through the coordinated control of all factors, which affect water quality in the area;

    g. Economic considerations; and

    h. The need for developing housing within the region.

22. The issuance of waste discharge requirements for this discharge is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (Public Resources Code, Division 13, Chapter 3, Section 21000 et seq.) in accordance with the California Water Code, Section 13389.

23. This Regional Board has considered all water resource related environmental factors associated with the discharge of wastes to the Aqua Hedionda Lagoon.

24. This Regional Board has notified the discharger and all known interested parties of its intent to issue NPDES waste discharge requirements for the proposed discharge of waste.

25. This Regional Board has, at a public meeting, heard and considered all comments pertaining to the discharge of seawater used to produce marine species to Aqua Hedionda Lagoon.

IT IS HEREBY ORDERED, that *Hubbs-SeaWorld Research Institute, Leon Raymond Hubbard, Jr. Marine Fish Hatchery* (hereinafter discharger), in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the Clean Water Act (CWA) and the regulations adopted thereunder, shall comply with the following requirements for discharges of wastes to the Aqua Hedionda Lagoon:

A. PROHIBITIONS

1. Compliance with the waste discharge prohibitions contained in the Basin Plan and listed in *Attachment B* hereto is required as a condition of this Order. [Basin Plan (BP)]

2. Discharges of wastes in a manner or to a location which have not been specifically authorized by this Order and for which valid waste discharge requirements are not in force are prohibited.

3. Wastes shall not be discharged into or adjacent to areas where the protection of beneficial uses requires spatial separation from waste fields. [Enclosed Bays and Estuaries Policy (EBEP)]

4. The discharge of municipal and industrial waste sludge and untreated sludge digester supernatant, centrate, or filtrate to Aqua Hedionda Lagoon, or into a waste stream that discharges to the Aqua Hedionda Lagoon is prohibited. [EBEP]

5. The deposition of rubbish or refuse into Aqua Hedionda Lagoon or at any place where they would be eventually transported to Aqua Hedionda Lagoon is prohibited. Rubbish and refuse include any cans, bottles, paper, plastic, vegetable matter, dead animals, or dead fish deposited or caused to be deposited by man. [EBEP]

6. The discharge or by-passing of untreated waste to Aqua Hedionda Lagoon is prohibited. [EBEP]

7. New discharges[1/] of municipal wastewaters and industrial process waters[1/] (exclusive of cooling water discharges) to Aqua Hedionda Lagoon, which are not consistently treated and discharged in a manner that would enhance the quality of receiving waters above that which would occur in the absence of the discharge, are prohibited. [EBEP]

8. The discharge of seawater (used to produce marine species) to Aqua Hedionda Lagoon in excess of a monthly average of

daily maximum flowrate of 1.73 MGD is prohibited unless the discharger obtains revised waste discharge requirements authorizing an increased flowrate.

9. The discharge of wastes to Aqua Hedionda Lagoon containing concentrations of pollutants in excess of those identified in the *Discharge Specifications* of this Order is prohibited.

10. Odors, vectors, and other nuisances of waste origin beyond the limits of the property controlled by discharger are prohibited.

11. The discharge of waste, exclusive of seawaters (used to produce marine species) as discussed in the Findings of this Order, are prohibited.

B. DISCHARGE SPECIFICATIONS

1. The discharger shall not cause pollution, contamination, or nuisance, as those terms are defined in CWC 13050, as a result of the treatment or discharge of wastes.

2. The discharge of seawater (used to produce marine species) to Aqua Hedionda Lagoon containing pollutants in excess of the following effluent limitations[2/] are prohibited:

Constituent	Units	30-Day Average	Daily Maximum	Instantaneous Maximum
Acute Toxicity[3/]	TUa	1.5	2.0	2.5
Chronic Toxicity[4/]	TUc	--	1	--
pH	units	Within the limits of 6.0 to 9.0 at all times.		
Total Suspended Solids	mg/L	A minimum removal rate of 50% of the TSS shall be maintained at the discharge from the settling basin when compared to the influent to the settling basin (i.e. a 50% removal of TSS from the backwash water from the rapid sand filters).		

Note: TUa = Toxicity Units Acute (Ocean Plan, Table A)
TUc = Toxicity Units Chronic (Ocean Plan, Table B)

3. Water quality based effluent limitations as described in the Implementation Policy and the CTR may be established for the proposed discharge after a *reasonable potential analysis* is conducted for the proposed discharge. *Reporting Requirement E.2* of this Order requires the discharger to submit monitoring information for an analysis of the discharge and to determine compliance with the Implementation Policy and CTR.

4. All waste treatment, containment and disposal facilities shall be protected against 100-year peak stream flows as defined by the San Diego County flood control agency.

5. All waste treatment, containment and disposal facilities shall be protected against erosion, overland runoff and other impacts resulting from a 100-year frequency 24-hour storm.

6. Collected screenings, sludges, and other solids removed from liquid wastes, shall be disposed of in compliance with appropriate local, regional, and state regulations or statutes.

7. The discharge of substances for which effluent limitations are not established in this Order shall be prevented, or, if the discharge cannot be prevented, minimized.

C. RECEIVING WATER LIMITATIONS

1. The discharge of wastes to Aqua Hedionda Lagoon shall not by itself or jointly with any discharge(s) cause violation of the following water quality objectives.

   a. Physical Characteristics

      (1) Waters shall not contain oils, greases, waxes, or other materials in concentrations which result in a visible film or coating on the surface of the water or on objects in the water, or which cause nuisance or which otherwise adversely affect beneficial uses. [BP]

      (2) Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses. [BP]

      (3) The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered

in such a manner as to cause nuisance or adversely affect beneficial uses. [BP]

(4) Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses. [BP]

(5) Waters shall not contain taste or odor producing substances at concentrations, which cause a nuisance or adversely affect beneficial uses. [BP]

(6) Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. The transparency of the waters in lagoons and estuaries shall not be less than 50% of the depth at locations where measurement is made by means of a standard Secchi disk, except where lesser transparency is caused by rainfall runoff from undisturbed natural areas and dredging projects conducted in conformance with waste discharge requirements of the Regional Board. With these two exceptions, increases in turbidity attributable to controllable water quality factors shall not exceed the following limits:

Natural Turbidity	*Maximum Increase*
0–50 NTU	20% over natural turbidity level
50–100 NTU	10 NTU
Greater than 100 NTU	10% over natural turbidity level [BP]

b. Chemical Characteristics

(1) Dissolved oxygen levels shall not be less than 5.0 mg/L in inland surface waters with designated MAR or WARM beneficial uses or less than 6.0 mg/L in waters designated COLD beneficial uses. The annual mean dissolved oxygen concentration shall not be less than 7 mg/L more than 10% of the time. [BP]

(2) The pH shall not be changed at any time more than 0.2 units from that which occurs naturally. The pH shall not be depressed below 7.0 nor raised above 9.0. [BP]

(3) The Aqua Hedionda Lagoon waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths

cause nuisance or adversely affect beneficial uses. [BP]

(4) The discharge of wastes shall not cause concentrations of un-ionized ammonia (NH_3) to exceed 0.025 mg/l (as N) in Aqua Hedionda Lagoon. [BP]

(5) No individual pesticide or combination of pesticides shall be present in the water column, sediments or biota at concentration(s) that adversely affect beneficial uses. Pesticides shall not be present at levels which will bioaccumulate in aquatic organisms to levels which are harmful to human health, wildlife or aquatic organisms. [BP]

c. Radioactivity

Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life. [BP]

d. Toxicity

All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the Regional Board. [BP]

D. PROVISIONS

1. Pursuant to the CWC Section 13267(b) and 13383, the discharger shall comply with *Monitoring and Reporting Program No. 2001-237* as specified by this Regional Board. Monitoring results shall be reported at the intervals specified in *Monitoring and Reporting Program No. 2001-237*.

2. If the discharge consistently exceeds the effluent limitations in *Discharge Specification B.2* of this Order for *Acute Toxicity* or *Chronic Toxicity*, the discharger shall conduct a toxicity reduction evaluation (TRE). The TRE shall include all reasonable steps to identify the source of toxicity. Once the source(s) of toxicity is identified, the

discharger shall take all reasonable steps necessary to reduce toxicity to the required level.

3. The following sections of 40 CFR are incorporated into this permit by reference:

   a. 122.5 *Effect of a permit*
   b. 122.21 *Application for a permit*
   c. 122.22 *Signatories to permit applications and reports*
   d. 122.41 *Conditions applicable to all permits*
   e. 122.61 *Transfer of permits*
   f. 122.62 *Modification or revocation of permits*
   g. 122.63 *Minor modifications of permits*
   h. 122.64 *Termination of permits*

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

5. The discharger must comply with all conditions of this Order. Any permit noncompliance constitutes a violation of the Clean Water Act and the California Water Code and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a Report of Waste Discharge application.

6. The discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncomplying discharge.

7. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

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

   The filing of a request by the discharger for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in, or anticipated noncompliance with this Order, does not stay any condition of this Order.

8. Notwithstanding *Provisions D.7* above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollution in this Order, this Order shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition, and the discharger so notified.

9. The discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement.

10. In addition to any other grounds specified herein, this permit shall be modified or revoked at any time if, on the basis of any new data, this Regional Board determines that continued discharges may cause unreasonable degradation of the marine environment, (this includes any evaluation of monitoring data required by this Order pursuant to the Implementation Policy).

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

12. This Order is not transferable to any person except after notice to this Regional Board. This Regional Board may require modification, or revocation and reissuance of this Order, to change the name of the discharger and incorporate such other requirements as may be necessary under the California Water Code and the Clean Water Act. The discharger shall submit notice of any transfer of this Order's responsibility and coverage to a new discharger as described under *Reporting Requirement E.6*.

13. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property of another, nor protect the

discharger from its liabilities under federal, state, or local laws, nor create a vested right for the discharger to continue its waste discharge.

14. The discharger shall allow this Regional Board, or an authorized representative, or any representative of the United States Environmental Protection Agency upon the presentation of credentials and other documents as may be required by law, to:

    a. Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;

    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operation regulated or required under this Order; and

    d. Sample or monitor, at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the Clean Water Act or California Water Code, any substances or parameters at any location.

17. 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 includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order.

18. In an enforcement action it shall not be a defense for the discharger that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the discharger shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment

is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced or is lost.

19. A copy of this Order shall be posted at a prominent location at the *Leon Raymond Hubbard Jr. Fish Hatchery*, and shall be available to operating personnel at all times.

20. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.

E. REPORTING REQUIREMENTS

1. Annually, the discharger shall evaluate the data collected pursuant to *Receiving Water Monitoring C.1* of *Monitoring and Reporting Program No. 2001-237* and determine if the data indicates that the discharge has caused an exceedence of Basin Plan requirements or impacts to the beneficial uses in the Aqua Hedionda Lagoon.

2. Prior to April 10, 2002, the discharger shall analyze the priority pollutants specified (except for the Toxicity Equivalency Factors for 2,3,7,8-TCDD Equivalents, i.e. the congeners for 2,3,7,8-TCDD) in the CTR, the Implementation Policy, and in *Monitoring and Reporting Program No. 2001-237*. Prior to May 10, 2002, the discharger shall submit the results of the priority pollutant analyses to this Regional Board.

3. Prior to October 10, 2002, the discharger shall analyze the Toxicity Equivalency Factors for 2,3,7,8-TCDD Equivalents, i.e. the congeners for 2,3,7,8-TCDD specified in the Implementation Policy, and *Monitoring and Reporting Program No. 2001-237*. Prior to November 10, 2002, the discharger shall submit the results of the Toxicity Equivalency Factors analyses to this Regional Board.

4. The discharger shall file a new Report of Waste Discharge not less than 180 days prior to the following:

   a. Addition of any industrial waste to the discharge or the addition of a new process or product resulting in a change in the character of the wastes.

b. Significant change in disposal method (e.g., change in the method of treatment which would significantly alter the nature of the waste).

c. Significant change in disposal area (e.g., moving the discharge to a disposal area significantly removed from the original area, potentially causing different water quality or nuisance problems).

d. Increase in flow beyond that specified in this Order.

e. Other circumstances, which result in a material change in character, amount, or location of the waste discharge.

f. Any planned physical alterations or additions to the permitted facility.

5. The discharger shall give advance notice to this Regional Board of any planned changes in the permitted facility or activity which may result in noncompliance with the requirements of this Order.

6. The discharger must notify this Regional Board, in writing, at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new discharger. The notice must include a written agreement between the existing and new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current discharger and the new discharger. This agreement shall include an acknowledgment that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable after the transfer date.

7. The discharger shall report any noncompliance, which may endanger health or the environment. Any information shall be provided orally to this Regional Board within 24 hours from the time the discharger becomes aware of the circumstances. A 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 recurrence of the noncompliance. This Regional Board, or an authorized representative may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The following occurrences must be reported to this Regional Board within 24 hours:

a. Any upset which causes the effluent limitations of this order to be exceeded.

b. Any violation of any prohibition of this Order.

8. The discharger shall notify this Regional Board as soon as it knows or has reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic or non-toxic pollutant which is not limited in this Order, if that discharge will exceed the highest of the following *notification levels*:

(1) One hundred micrograms per liter (100 μg/l);

(2) Two hundred micrograms per liter (200 μg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 μg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

(3) Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge submitted in application for this Order in accordance with 40 CFR 122.21(g)(7); or

(4) The level established by this Regional Board in accordance with 40 CFR 122.44(f).

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic or non-toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

(1) Five hundred micrograms per liter (500 μg/l);

(2) One milligram per liter (1 mg/l) for antimony;

(3) Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge submitted in application for this Order in accordance with 40 CFR 122.21(g)(7); or,

(4) The level established by this Regional Board in accordance with 40 CFR 122.44(f).

9. The discharger shall furnish to this Regional Board, within a reasonable time, any information which this Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order, or to determine compliance with this Order. The discharger shall also furnish to this Regional Board, upon request, copies of records required to be kept by this Order.

10. The discharger shall provide adequate notice to this Regional Board of the following:

    a. Any new introduction of pollutants to the discharge.

    b. Any substantial change in the volume or character of pollutants being introduced into the discharge.

    c. For the purpose of this requirement, adequate notice shall include information regarding:

        (1) the quality and quantity of waste introduced into the discharge, and

        (2) any anticipated impact of the change on the quantity or quality of effluent discharged to Aqua Hedionda Lagoon.

11. When the discharger becomes aware that they failed to submit any relevant facts in a Report of Waste Discharge, or submitted incorrect information in a Report of Waste Discharge, or in any report to this Regional Board, they shall promptly submit such facts or information.

12. This Order expires on October 10, 2006. 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 new waste discharge requirements. The discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such dates, as application for issuance of new waste discharge requirements.

13. All applications, reports, or information submitted to this Regional Board shall be signed and certified.

    a. All Reports of Waste Discharge shall be signed as follows:

        (1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible

corporate officer means: (a) 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 (b) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (a) the chief executive officer of the agency, or (b) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).

b. All reports required by this Order, and other information requested by this Regional Board shall be signed by a person described in paragraph a. of this reporting requirement, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph a. of this reporting requirement;

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

(3) The written authorization is submitted to this Regional Board.

c. If an authorization under paragraph b. of this reporting requirement 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 b. of this reporting requirement must be submitted to this Regional Board prior to or together with any reports, information, or applications to be signed by an authorized representative.

d. Any person signing a document under paragraph a. or b. of this reporting requirement 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.

14. Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the California Regional Water Quality Control Board, San Diego Region and the United States Environmental Protection Agency, Region IX. As required by the Clean Water Act, Reports of Waste Discharge, this Order, and effluent data shall not be considered confidential.

15. The discharger shall submit reports and provide notifications as required by this Order in accordance with the following:

a. Reports required to be submitted to this Regional Board shall be sent to:

Industrial Compliance Unit
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court
San Diego, California 92123-4340

Notifications required to be provided to this Regional Board shall be made to:

Telephone - (858) 467-2952 or
Facsimile - (858) 571-6972

b. Reports required to be submitted to the USEPA shall be sent to:

U.S. Environmental Protection Agency
Region IX
Permits Issuance Section (W-5-1)
75 Hawthorne Street
San Francisco, California 94105

F. NOTIFICATIONS

1. CWC Section 13263(g) states:

No discharge of waste into the waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge. All discharges of waste into waters of the state are privileges, not rights.

2. The CWC provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the Clean Water Act. [CWC Sections 13385, and 13387]

Nothing in this Order shall be construed to protect the discharger from its liabilities under federal, state, or local laws.

Except as provided for in 40 CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the discharger from civil or criminal penalties for noncompliance.

Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the discharger is or may be subject to under Section 311 of the CWA.

Nothing in this Order shall be construed to preclude institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the CWA.

3. Any noncompliance with this permit constitutes violation of the California Water Code and is grounds for denial of an application for permit modification. (Also see 40 CFR 122.41(a))

4. This Order shall become effective 10 days after the date of its adoption, provided the USEPA Regional Administrator has no objection. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.

G. ENDNOTE REFERENCES

Endnote references for Order No. 2001-237 (NPDES No. CA0109355), *WASTE DISCHARGE REQUIREMENTS FOR HUBBS-SEAWORLD RESEARCH INSTITUTE, LEON RAYMOND HUBBARD, JR. MARINE FISH HATCHERY, AQUA HEDIONDA LAGOON, SAN DIEGO COUNTY.*

1. See *Water Quality Control Policy for the Enclosed Bays and Estuaries of California*, May 16, 1974, for definition of terms.

2. See the *Fact Sheet for Order No. 2001-237, NPDES No. CA0109355, Waste Discharge Requirement for, Hubbs-SeaWorld Research Institute, Leon Raymond Hubbard, Jr. Marine Fish Hatchery, Aqua Hedionda Lagoon, San Diego County* for rationale for limitations and a citation of reference resources for limitations.

3. <u>ACUTE TOXICITY</u>

   a. Acute Toxicity (TUa)

   Expressed in Toxic Units Acute (TUa)

   TUa = 100/96-hr LC 50%

   b. Lethal Concentration 50% (LC 50)

   LC 50 (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay techniques using standard test species. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC 50 may be determined after the test samples are adjusted to remove the influence of those substances.

When it is not possible to measure the 96-hour LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$TUa = \frac{\log (100 - S)}{1.7}$$

S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

* The above acute toxicity determination is from the Ocean Plan, 1997. The test organisms used for the above acute toxicity testing are not specified in the Ocean Plan, 1997. The test methods and test organisms for the above acute toxicity testing shall be consistent with *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwaters and Marine Organisms, Fourth Edition, EPA/600/4-90/027F, August 1993,* or an equivalent method.

4. CHRONIC TOXICITY

This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response.

a. Chronic Toxicity (TUc)

Expressed as Toxic Units Chronic (TUc)

TUc = 100/NOEL

b. No Observed Effect Level (NOEL)

The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Appendix II of the Ocean Plan.

* The above chronic toxicity determination is from the Ocean Plan, 1997. The test organisms used for the above chronic toxicity testing are specified in the Ocean Plan, 1997. The test methods and test organisms for the above chronic toxicity testing shall be consistent with the Ocean Plan, 1997, or the *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Second Edition, EPA/600/4-91/003, July 1994,* or an equivalent method.

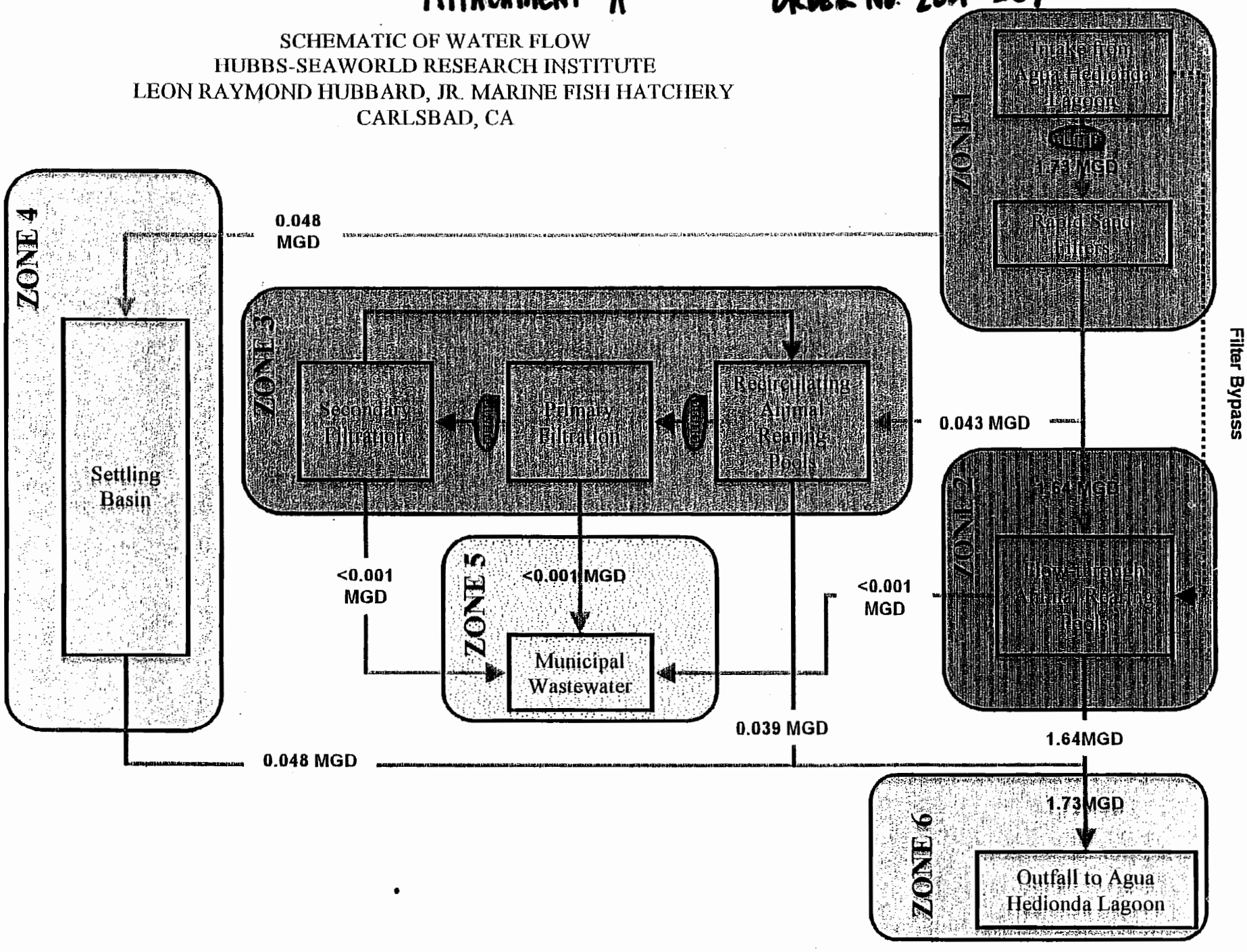
5. See *Appendix I* of the 1990 Ocean Plan for definition of terms.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on October 10, 2001.

JOHN H. ROBERTUS
Executive Officer

ATTACHMENT A ORDER No. 2001-237

SCHEMATIC OF WATER FLOW
HUBBS-SEAWORLD RESEARCH INSTITUTE
LEON RAYMOND HUBBARD, JR. MARINE FISH HATCHERY
CARLSBAD, CA



ATTACHMENT B

ORDER NO. 2001-237

BASIN PLAN WASTE DISCHARGE PROHIBITIONS

California Water Code Section 13243 provides that a Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste, or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person, as defined by Section 13050 of the California Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination, or nuisance as defined in California Water Code Section 13050, is prohibited.

2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited.

3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by an NPDES permit or a dredge or fill material permit (subject to the exemption described in California Water Code Section 13376) is prohibited.

4. The discharge of treated or untreated waste to lakes or reservoirs used for municipal water supply, or to inland surface water tributaries thereto, is prohibited.

5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.

6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the enrollee is prohibited unless the discharge is authorized by the Regional Board.

7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner that may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.

8. Any discharge to a storm water conveyance system that is not composed entirely of "storm water" is prohibited unless authorized by the Regional Board. [Federal Regulations 40 CFR 122.26 (b) defines storm water as storm water runoff, snow melt

runoff, and surface runoff and drainage.]

9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.

10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in California Water Code Section 13264, is prohibited.

11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.

12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.

13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the Regional Board.

14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities that cause deleterious bottom deposits, turbidity or discoloration in waters of the state or that unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

15. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.

16. The discharge of untreated sewage from vessels to San Diego Bay is prohibited.

17. The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at mean lower low water (MLLW) is prohibited.

18. The discharge of treated sewage from vessels that do not have a properly functioning US Coast Guard certified Type I or Type II marine sanitation device to portions of San Diego Bay that are greater than 30 feet deep at MLLW is prohibited.

ATTACHMENT C

ORDER NO. 2001-237

STANDARD PROVISIONS

1. The following sections of 40 CFR are incorporated into this permit by reference:

   a. 122.5 *Effect of a permit*
   b. 122.21 *Application for a permit*
   c. 122.22 *Signatories to permit applications and reports*
   d. 122.41 *Conditions applicable to all permits*
   e. 122.61 *Transfer of permits*
   f. 122.62 *Modification or revocation of permits*
   g. 122.63 *Minor modifications of permits*
   h. 122.64 *Termination of permits*

2. *Review and revision of permit*: Upon application by any affected person, or on its own motion, the Regional Board may review and revise this permit. [CWC §13263(e)]

3. *Termination or modification of permit*: This permit may be terminated or modified for causes, including, but not limited to, all of the following:

   (a) Violation of any condition contained in this permit.
   (b) Obtaining this permit by misrepresentation, or failure to disclose fully all relevant facts.
   (c) A change in any condition that requires either a temporary of permanent reduction or elimination of the permitted discharge. [CWC §13381]

4. *Material change*: Not less than 180 days prior to any material change in the character, location, volume, or amount of waste discharge, the discharger shall submit a technical report describing such changes. Such changes include but are not limited to the following:

   (a) Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.
   (b) Significant change in disposal method, e.g., change from land disposal to a direct discharge to water, or change in the method of treatment which would significantly alter the characteristics of the waste.
   (c) Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area potentially causing different water quality or nuisance problems.
   (d) Increase in flow beyond that specified in the waste discharge requirements.
   (e) Increase in area or depth to be used for solid waste disposal beyond that specified

in the waste discharge requirements. [CWC 13372, 13376, 13264, 23 CCR 2210]

(f) Any substantial change in the amount or characteristics of pollutants used, handled, stored, or generated.

(g) Any new discharge of pollutants or new potential pollutant source.

(h) Other circumstances which could result in a material change in the character, amount, or location of discharges. [CWC 13372, 13264,23 CCR 2210]

5. *Transfers*: When this permit is transferred to a new owner or operator, such requirements as may be necessary under the California Water Code may be incorporated into this permit.

6. *Conditions not stayed*: The filing of a request by the Discharger for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.

7. *Monitoring and Reporting Program*: The Discharger shall conduct monitoring and submit reports in accordance with *Monitoring and Reporting Program (MRP) No. 2001-237*. Monitoring results shall be reported at the intervals specified in *MRP No. 2001-237*. [CWC 13267 & 13383, 23 CCR 2230, 40 CFR 122.43(a), 122.44(l)(4), 122.48]

8. *Availability*: A copy of this Order shall be kept at a readily accessible location at the facility and shall be available to on-site personnel at all times.

9. *Duty to minimize or correct adverse impacts*: The discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

10. *Responsibilities, liabilities, legal action, penalties*: The Porter-Cologne Water Quality Control Act provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the Clean Water Act (CWA). [CWC §13385, 13387]

    Nothing in this Order shall be construed to protect the discharger from its liabilities under federal, state, or local laws. Except as provided for in 40 CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the discharger from civil or criminal penalties for noncompliance.

    Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the discharger is or may be subject to under Section 311 of the CWA.

    Nothing in this Order shall be construed to preclude institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties established

pursuant to any applicable state law or regulation under authoring preserved by Section 510 of the CWA

11. *Noncompliance*: Any noncompliance with this permit constitutes violation of the California Water Code and is grounds for denial of an application for permit modification. [40 CFR 122.41 (a)]

12. *Discharge is a privilege*: No discharge of waste into waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge. All discharges of waste into waters of the state are privileges, not rights. [CWC §13263(g)]

13. *Permittee*: For the purposes of this permit, the term "permittee" used in parts of 40 CFR incorporated into this permit by reference and/or applicable to this permit shall have the same meaning as the term "discharger" used elsewhere in this permit.

14. *Director*: For the purposes of this permit, the term "Director" used in parts of 40 CFR incorporated into this permit by reference and/or applicable to this permit shall have the same meaning as the term "Regional Board" used elsewhere in this permit, except that in 40 CFR 122.41(h) & (i), "Director" shall mean "Regional Board, SWRCB, and USEPA."

15. *Effective date*: This Order shall become effective ten days after the date of its adoption provided the USEPA Regional Administrator has no objection. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.

16. *Expiration*: This Order expires October 10, 2006. [40 CFR 122.43, 122.44(h), 122.46]

17. *Continuation of expired permit*: After this permit expires, the terms and conditions of this permit are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits are complied with. [40 CFR 122.6, 23 CCR 2235.4]

18. *Applications*: Any application submitted by the discharger for reissuance or modification of this permit shall satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the California Water Code and the California Code of Regulations.

19. *Confidentiality*: Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this permit will be considered confidential, and all such information and documents shall be available for review by the public at the office of the Regional Board.

20. *Severability*: The provisions of this order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this order shall

not be affected thereby.

21. *Discharge Monitoring Quality Assurance (DMQA) Program*: Then Discharger shall conduct appropriate analyses on any sample provided by EPA as part of the DMQA program. The results of such analyses shall be submitted to EPA's DMQA manager. [SWRCB/USEPA 106 MOA]

22. *Pollution, Contamination, Nuisance*: The handling, transport, treatment, or disposal of waste or the discharge of waste to waters of the state in a manner which causes or threatens to cause a condition of pollution, contamination, or nuisance, as those terms are defined in CWC 13050, is prohibited.

23. *Additional Reporting Requirements*: [40 CFR 122.42(a)] In addition to the reporting requirements under 40 CFR 122.41 (l), all existing manufacturing, commercial, mining, and silvicultural discharges must notify the Regional Board as soon as they know or have reason to believe:

    (1) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, of that discharge will exceed the highest of the following "notification levels:"

        (a) One hundred micrograms per liter (100 μg/l);
        (b) Two hundred micrograms per liter (200 μg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 μg/l) for 2, 4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
        (c) The level established by the Regional Board in accordance with 40 CFR 122.44(f).

    (2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

        (a) Five hundred micrograms per liter (500 μg/l)
        (b) One milligram per liter (1 mg/l) for antimony;
        (c) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
        (d) The level established by the Regional Board in accordance with 40 CFR 122.44(f).

24. *Report Submittal*: The discharger shall submit reports and provide notifications as required by this Order in accordance with the following:

a. Reports required to be submitted to this Regional Board shall be sent to:

Industrial Compliance Unit
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court
San Diego, California 92123-4340

Notifications required to be provided to this Regional Board shall be made to:

Telephone - (858) 467-2952 or
Facsimile - (858) 571-6972

b. Reports required to be submitted to the USEPA shall be sent to:

U.S. Environmental Protection Agency
Region IX
Permits Issuance Section (W-5-1)
75 Hawthorne Street
San Francisco, California 94105

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

MONITORING AND REPORTING PROGRAM NO. 2001-237
FOR

HUBBS-SEAWORLD
RESEARCH INSTITUTE

LEON RAYMOND HUBBARD, JR.
MARINE FISH HATCHERY

AGUA HEDIONDA LAGOON

SAN DIEGO COUNTY

PURPOSE

This monitoring program is intended to:

- Document short-term and long-term effects of the discharge on receiving waters, sediments, biota, and beneficial uses of the receiving water.
- Determine compliance with NPDES permit terms and conditions.
- Be used to determine compliance with water quality objectives.
- Determine if water-quality based effluent limits are necessary pursuant to the Policy and California Toxics Rule (CTR), 40 CFR 131.38.

A. MONITORING PROVISIONS

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations as shown in *Attachment A*, unless otherwise specified. Other waste stream, body of water or substance shall not dilute the monitored discharge. Monitoring points shall not be changed without notification to and the approval of this Regional Board.

2. Monitoring must be conducted according to United States Environmental Protection Agency (USEPA) test procedures approved under Title 40, United States Code of Federal

Regulations (CFR), Part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act* as amended, unless other test procedures are specified in Order No. 2001-237 and/or in this Monitoring and Reporting Program and/or by this Regional Board.

4. Monitoring results must be reported on forms approved by this Regional Board. Duplicate copies of the monitoring reports signed and certified as required by *Reporting Requirement E.13* of *Order No. 2001-237* must be submitted to the USEPA and the Regional Board at the addresses listed in *Reporting Requirement E.15* of *Order No. 2001-237.*

5. If the discharger monitors any pollutant more frequently than required by Order No. 2001-237 or by this monitoring and reporting program, using test procedures approved under 40 CFR Part 136, or as specified in Order No. 2001-237 or this Monitoring and Reporting Program or by this Regional Board, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharger's monitoring report. The increased frequency of monitoring shall also be reported.

6. 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 Order No. 2001-237 and this monitoring and reporting program, and records of all data used to complete the application for Order No. 2001-237, for a period of at least five years from the date of the sample, measurement, report, or application. This period may be extended by request of this Regional Board at any time.

7. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in Order No. 2001-237 or this Monitoring and Reporting Program.

8. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services or a laboratory approved by this Regional Board.

9. The discharger shall report all instances of noncompliance not reported under *Reporting Requirement E.7* of *Order No. 2001-237* at the time monitoring reports are submitted. The reports shall contain the information listed in *Reporting Requirement E.7.*

10. Records of monitoring information shall include:

    a. The date, exact place, and time of sampling or measurements;
    b. The individual(s) who performed the sampling or measurements;
    c. The date(s) analyses were performed;
    d. The individual(s) who performed the analyses;
    e. The analytical techniques or methods used; and
    f. The results of such analyses.

11. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

12. Monitoring results shall be reported at intervals and in a manner specified in Order No. 2001-237 or in this Monitoring and Reporting Program.

13. This Monitoring and Reporting Program may be modified by this Regional Board, as appropriate.

B. EFFLUENT MONITORING

1. Effluent monitoring shall be conducted at the locations identified in *Attachment A* to this Monitoring and Reporting program, and described in the *Fact Sheet for Order No. 2001-237* and shall be conducted as noted in the following table.

Constituent	Units	Sample Type	Analysis Frequency	Reporting Frequency
Flowrate	MGD		daily	quarterly
Salinity	ppt	grab[1/]	monthly	quarterly
pH	units	grab[1/]	monthly	quarterly
Temperature	°C	grab[1/]	monthly	quarterly
Settleable Solids	mL/L	grab[1/]	monthly	quarterly
Total Suspended Solids	mg/L	grab[1/]	monthly	quarterly
Total Kjedahl nitrogen	mg/L	grab[1/]	monthly	quarterly
Organic nitrogen	mg/L	grab[1/]	monthly	quarterly

Ammonia	mg/L	grab[1/]	monthly	quarterly
Un-ionized Ammonia	mg/L	grab[1/]	monthly	quarterly
Nitrate (as N)	mg/L	grab[1/]	monthly	quarterly
Nitrite (as N)	mg/L	grab[1/]	monthly	quarterly
Total Phosphorus	mg/L	grab[1/]	monthly	quarterly
Orthophosphate	mg/L	grab[1/]	monthly	quarterly
Copper	µg/L*	composite[2/]	quarterly	quarterly
Zinc	µg/L*	composite[2/]	quarterly	quarterly
Acute Toxicity	TUa	composite[2/]	annually	annually
Chronic Toxicity	Tuc	composite[2/]	once in five years	

Note: MGD = million gallons per day
ppt = parts per thousand
mL/L = milliliters per liter
mg/L = milligrams per liter
µg/L = micrograms per liter
* = analyze as total recoverable metals

2. Backwash water from the rapid sand filters

The backwash waters from the rapid sand filters shall be monitored for total suspended solids prior to entering the settling basin, and when discharged from the settling basin but prior to commingling with other waste streams. The backwash water monitoring shall be conducted as noted below. (This monitoring will be conducted to establish compliance with *Discharge Specification B.2* requiring a minimum of 50% removal of suspended solids from the backwash waters from the rapid sand filters.)

Constituent	**Units**	**Sample Type**	**Analysis Frequency**	**Reporting Frequency**
Total Suspended Solids prior to entering the Settling Basin	mg/L	grab[1/]	weekly	quarterly
Total Suspended Solids when discharged from the Settling Basin	mg/L	grab[1/]	weekly	quarterly

C. RECEIVING WATER MONITORING

1. Receiving water monitoring shall be conducted as noted below in the outer Aqua Hedionda Lagoon at a location representative of the quality of the lagoon waters and of the intake water to the facility.

Constituent	Units	Sample Type	Analysis Frequency	Reporting Frequency
Salinity	ppt	grab[1/]	monthly	quarterly
pH	units	grab[1/]	monthly	quarterly
Temperature	°C	grab[1/]	monthly	quarterly
Settleable Solids	mL/L	grab[1/]	monthly	quarterly
Total Suspended Solids	mg/L	grab[1/]	monthly	quarterly
Total Kjedahl nitrogen	mg/L	grab[1/]	monthly	quarterly
Organic nitrogen	mg/L	grab[1/]	monthly	quarterly
Ammonia	mg/L	grab[1/]	monthly	quarterly
Un-ionized Ammonia	mg/L	grab[1/]	monthly	quarterly
Nitrate (as N)	mg/L	grab[1/]	monthly	quarterly
Nitrite (as N)	mg/L	grab[1/]	monthly	quarterly
Total Phosphorus	mg/L	grab[1/]	monthly	quarterly
Orthophosphate	mg/L	grab[1/]	monthly	quarterly
Copper	µg/L*	grab[1/]	quarterly	quarterly
Zinc	µg/L*	grab[1/]	quarterly	quarterly

D. POLICY AND CTR MONITORING

In order to comply with the Policy, the discharger shall monitor its effluent and the receiving waters for the priority pollutants listed in Appendix A prior to April 10, 2002, and submit the results to this Regional Board prior to May 10, 2002.

In order to comply with the Policy, the Discharge shall monitor its effluent for the *Toxicity Equivalency Factors for 2,3,7,8-TCDD Equivalents* once during wet weather and once during dry weather prior to October 10, 2002, and submit the results to this Regional Board prior to November 10, 2002.

The monitoring results shall be reported as specified in Section 2.4.4 of the Policy, which is included in Appendix A.

E. ANNUAL SUMMARY REPORT

1. The discharger shall submit an annual tabular and graphical summary of the data collected for this monitoring program.
2. The annual report must include a narrative evaluation of the data collected as specified in *Provision D.2* of *Order No. 2001-237*.

F. MONITORING REPORT SCHEDULE

Monitoring reports shall be submitted to this Regional Board according to the dates in the following schedule:

Reporting Frequency	Report Period	Report Due
Quarterly	January through March	May 1
	April through June	August 1
	July through September	November 1
	October through December	February 1
Annually	January through December	February 1
Once in five years		February 1, 2006
Appendix A		
Priority Pollutants	Oct. 10, 2001 to Apr. 10, 2002	May 10, 2002
TEF	Oct. 10, 2001 to Oct. 10, 2002	November 10, 2002

G. Endnote References

1. A grab sample is defined as an individual sample of at least 100 milliliters collected over a period not exceeding 15 minutes. Grab samples shall be collected over a shorter period if necessary to ensure that the constituent/parameter concentration in the sample is the same as that at the sampling location at the time the sample is collected.

2. A composite sample is defined as a combination of at least six sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 18-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream

flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.

Ordered by:

JOHN H. ROBERTUS
Executive Officer

Date: October 10, 2001

Appendix A

Monitoring
Information
for
Compliance
With

Policy for the Implementation of Toxics
Standards for Inland Surface Waters,
Enclosed bays, and Estuaries of California

(Phase 1 of the Inland Surface waters Plan
and the Enclosed Bays and Estuaries Plan)

2000

October 10, 2001

REQUIREMENT FOR MONITORING OF PRIORITY POLLUTANTS REGULATED IN THE CALIFORNIA TOXICS RULE

In accordance with *Reporting Requirement E.1 and E.2* of *WDR Order No. 2001-237*, the discharger must submit data to the San Diego Regional Water Quality Control Board to: (1) determine if water-quality based effluent limitations for priority pollutants are required; and (2) to calculate effluent limitations, if required. **The submitted data must include the following items:**

- the concentration of each priority pollutant (Table 1. 40 CFR 131.38 Priority Pollutants) in the effluent at the point of discharge;
- the concentration of each priority pollutant (Table 1. 40 CFR 131.38 Priority Pollutants) in the receiving water upstream of the point of discharge;
- the flow rate of the receiving water at the time of sampling (if discharge is to a river or creek);
- the pH of the effluent;
- the pH of the receiving water;
- the hardness of the effluent (fresh waters);
- the salinity of the receiving water (marine waters);
- the *Toxic Equivalency Factors* (TEFs) for 2,3,7,8-TCDD Equivalents (Table 4) must be analyzed and submitted according to *Reporting Requirement E.2* of *Order No. 2001-237*; and
- the requirements listed in *Monitoring and Reporting Program No. 2001-237, Order No. 2001-237* or in this *Appendix*.

The priority pollutants must be sampled and analyzed prior to April 10, 2002. The results from monitoring for the priority pollutants must be submitted to the Regional Board prior to May 10, 2002. Upon the Regional Board's evaluation of the submitted data, further monitoring of any or all of the priority pollutants may be required.

SWRCB-approved laboratory methods and the corresponding minimum levels (MLs) for the examination of each priority pollutant are listed in Tables 2a, 2b, 2c, and 2d of this Appendix. Reporting requirements for the data to be submitted are listed in this Appendix.

Table 1. 40 CFR 131.38 – Priority Pollutants

Compound	Concentration (µg/L)
Antimony	
Arsenic	
Beryllium	
Cadmium	
Chromium (III)	
Chromium (VI)	
Copper	
Lead	
Mercury	
Nickel	
Selenium	
Silver	
Thallium	
Zinc	
Cyanide	
Asbestos	
2,3,7,8-TCDD (Dioxin)	
Acrolein	
Acrylonitrile	
Benzene	
Bromoform	
Carbon Tetrachloride	
Chlorobenzene	
Chlorodibromomethane	
Chloroethane	
2-Chloroethylvinyl Ether	
Chlroform	
Dichlorobromomethane	
1,1-Dichloroethane	
1,2-Dichloroethane	
1,1-Dichloroethylene	
1,2-Dichloropropane	
1,3-Dichloropropylene	
Ethylbenzene	
Methyl Bromide	
Methyl Chloride	
Methylene Chloride	
1,1,2,2-Tetrachloroethane	
Tetrachloroetheylene	
Toluene	
1,2-t-Dichloroethylene	

Compound	Concentration (µg/L)
1,1,1-Trichloroethane	
1,1,2-Trichloroethane	
Trichloroethylene	
Vinyl Chloride	
2-Chlorophenol	
2,4-Dichlorophenol	
2,4-Dimehtylphenol	
2-Methyl-4,6-Dinitrophenol	
2,4-Dinitrophenol	
2-Nitrophenol	
4-Nitrophenol	
3-Methyl-4-Chlorophenol	
Pentachlorophenol	
Phenol	
2,4,6-Trichlorophenol	
Acenaphthene	
Acenaphthylene	
Anthracene	
Benzidine	
Benzo(a)Anthracene	
Benzo(a)Pyrene	
Benzo(b)Fluoranthene	
Benzo(ghi)Perylene	
Benzo(k)luoranthene	
Bis(2-Chloroethoxy)Methane	
Bis(2-Chloroethyl)Ether	
Bis(2-Chloroisopropyl)Ether	
Bis(2-Ethylhexyl)Phthalate	
4-Bromophenyl Phenyl Ether	
Butylbenzyl Phthalate	
2-Chloronaphthalene	
4-Chlorophenyl Phenyl Ether	
Chrysene	
Dibenzo(a,h)Anthracene	
1,2-Dichlorobenzene	
1,3-Dichlorobenzene	
1,4-Dichlorobenzene	
3,3'-Dichlorobenzidine	
Diethyl Phthalate	
Dimethyl Phthalate	
Di-n-Butyl Phthalate	

Compound	Concentration (µg/L)
2,4-Dinitrotoluene	
Di-n-Octyl Phthalate	
1,2-Diphenylhydrazine	
Fluoranthene	
Fluorene	
Hexachlorobenzene	
Hexachlorobutadiene	
Hexachlorocyclopentadiene	
Hexachloroethane	
Indeno(1,2,3-cd) Pyrene	
Isophorone	
Naphthalene	
Nitrobenzene	
N-Nitrosodimethylamine	
N-Nitrosodi-n-Propylamine	
N-Nitrosodiphenylamine	
Chlordane	
Phenanthrene	
Pyrene	

Compound	Concentration (µg/L)
1,2,4-Trichlorobenzene	
Aldrin	
Alpha-BHC	
beta-BHC	
gamma-BHC	
delta-BHC	
4,4'-DDT	
4,4'-DDE	
4,4'-DDD	
Dieldrin	
alpha-Endosulfan	
beta-Endosulfan	
Endosulfan Sulfate	
Endrin	
Endrin Aldehyde	
Heptachlor	
Heptachlor Epoxide	
PCBs	
Toxaphene	

SWRCB Minimum Levels in ppb (µg/L)

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

Table 2a - VOLATILE SUBSTANCES*	GC	GCMS
1,1 Dichloroethane	0.5	1
1,1 Dichloroethene	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
Bromomethane	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
Tetrachloroethene	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
1,2 Benzanthracene	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		
3,4 Benzofluoranthene		10	10	
4 Chloro-3-methylphenol	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(3,4 Benzopyrene)		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	

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

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

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

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

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

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

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

Techniques:

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

MONITORING AND REPORTING REQUIREMENTS FOR THE POLICY

The following information must be included in the monitoring reports.

1. **Laboratory Requirements**. The laboratory analyzing the monitoring samples shall be certified by the Department of Health Services in accordance with the provisions of Water Code Section 13176 and **must include** quality assurance/quality control data with their reports.

2. **Minimum Levels (ML)**. The minimum levels are in accordance with the values listed in Tables 2a through 2d.

3. **Method Detection Limit (MDL)**. The method detection limit for the laboratory shall be determined by the procedure found in 40 Code of Federal Regulations (CFR) Part 136 (revised as of May 14, 1999).

4. **Reporting Protocols**. The results of analytical determinations for the presence of chemical constituents in a sample shall use the following reporting protocols (Policy §2.4.4):

   a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
   b. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.
   c. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory, if such information is available, may include numerical estimates of the data quantity for the reported result. Numerical estimates of data quantity may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.
   d. Sample results that are less than the laboratory's MDL shall be reported as "Not Detected" or ND.

5. **Data Format**. The monitoring report shall contain the following information for each pollutant:

   a. The name of the pollutant.
   b. The analytical results of the effluent monitoring.
   c. The applicable Minimum Level (ML) as specified in Tables 2a through 2d.
   d. The laboratory's current Method Detection Limit (MDL), as determined by the procedure found in 40 CFR Part 136 (revised as of May 14, 1999).
   e. The measured or estimated concentration.

Example of Data Format.

Discharger:_____
Contact Name:_____
Phone Number:_____
Sample ID _____
Sample location _____

Name of Laboratory:_____
Laboratory Contact:_____
Phone Number:_____

Name of Constituent	Date Sample Collected	Date Sample Analyzed	USEPA Method Used	Analytical Results (ug/L)	ML (ug/L)	MDL (ug/L)	RDL (ug/L)	Comments
1,1 Dichloroethane								
1,1 Dichloroethene								
1,1,1 Trichloroethane								
1,1,2 Trichloroethane								
1,1,2,2 Tetrachloroethane								
1,2 Dichlorobenzene (volatile)								
1,2 Dichloroethane								
1,2 Dichloropropane								
1,3 Dichlorobenzene (volatile)								
1,3 Dichloropropene (volatile)								
1,4 Dichlorobenzene (volatile)								
Acrolein								
Acrylonitrile								
Benzene								
Bromoform								
Bromomethane								
Carbon Tetrachloride								

Name of Constituent	Date Sample Collected	Date Sample Analyzed	USEPA Method Used	Analytical Results (ug/L)	ML (ug/L)	MDL (ug/L)	RDL (ug/L)	Comments
VOLATILE POLLUTANTS								
Chlorobenzene								
Chlorodibromo-methane								
Chloroethane								
Chloroform								
Chloromethane								
Dichlorobromo-methane								
Dichloromethane								
Ethylbenzene								
Tetrachloroethene								
Toluene								
Trans-1,2 Dichloroethylene								
Trichloroethene								
Vinyl Chloride								
SEMI – VOLATILE POLLUTANTS								
1,2 Benzanthracene								
1,2 Dichlorobenzene (Semivolatile)								
1,2 Diphenylhydrazine								
1,2,4 Trichlorobenzene								
1,3 Dichlorobenzene (Semivolatile)								
1,4 Dichlorobenzene (Semivolatile)								
2 Chlorophenol								
2,4 Dichlorophenol								
2,4 Dimethylphenol								
2,4 Dinitrophenol								

Name of Constituent	Date Sample Collected	Date Sample Analyzed	USEPA Method Used	Analytical Results (ug/L)	ML (ug/L)	MDL (ug/L)	RDL (ug/L)	Comments
2,4 Dinitrotoluene								
2,4,6 Trichlorophenol								
2,6 Dinitrotoluene								
2-Nitrophenol								
2-Chloroethyl vinyl ether								
2-Chloronaphthalene								
3,3' Dichlorobenzidine								
3,4 Benzofluoranthene								
4 Chloro-3-methylphenol								
4,6 Dinitro-2-methylphenol								
4-Nitrophenol								
4-Bromophenyl phenyl ether								
4-Chlorophenyl phenyl ether								
Acenaphthene								
Acenaphthylene								
Anthracene								
Benzidine								
Benzo (a) pyrene(3,4 Benzopyrene)								
Benzo (g,h,i) perylene								
Benzo (k) fluoranthene								
bis 2-(1-Chloroethoxyl methane								
bis(2-Chloroethyl) ether								
Bis(2-Chloroisopropyl) ether								

Name of Constituent	Date Sample Collected	Date Sample Analyzed	USEPA Method Used	Analytical Results (ug/L)	ML (ug/L)	MDL (ug/L)	RDL (ug/L)	Comments
Bis(2-Ethylhexyl) phthalate								
Butyl benzyl phthalate								
Chrysene								
di-n-Butyl phthalate								
di-n-Octyl phthalate								
Dibenzo(a,h)-anthracene								
Diethyl phthalate								
Dimethyl phthalate								
Fluoranthene								
Fluorene								
Hexachloro-cyclopentadiene								
Hexachlorobenzene								
Hexachlorobutadiene								
Hexachloroethane								
Indeno(1,2,3,cd)-pyrene								
Isophorone								
N-Nitroso diphenyl amine								
N-Nitroso-dimethyl amine								
N-Nitroso-di n-propyl amine								
Naphthalene								
Nitrobenzene								
Pentachlorophenol								
Phenanthrene								
Phenol								
Pyrene								

Name of Constituent	Date Sample Collected	Date Sample Analyzed	USEPA Method Used	Analytical Results (ug/L)	ML (ug/L)	MDL (ug/L)	RDL (ug/L)	Comments
INORGANICS								
Antimony								
Arsenic								
Beryllium								
Cadmium								
Chromium (total)								
Chromium VI								
Copper								
Cyanide								
Lead								
Mercury								
Nickel								
Selenium								
Silver								
Thallium								
Zinc								
PESTICIDES								
4,4'-DDD								
4,4'-DDE								
4,4'-DDT								
a-Endosulfan								
a-Hexachloro-cyclohexane								
Aldrin								
b-Endosulfan								
b-Hexachloro-cyclohexane								
Chlordane								
d-Hexachloro-								

cyclohexane								
Name of Constituent	Date Sample Collected	Date Sample Analyzed	USEPA Method Used	Analytical Results (ug/L)	ML (ug/L)	MDL (ug/L)	RDL (ug/L)	Comments
Dieldrin								
Endosulfan Sulfate								
Endrin								
Endrin Aldehyde								
Heptachlor								
Heptachlor Epoxide								
Lindane (g-Hexachloro-cyclohexane								
PCB 1016								
PCB 1221								
PCB 1232								
PCB 1242								
PCB 1248								
PCB 1254								
PCB 1260								
Toxaphene								

Marine Water
Salinity (ppt) _____
pH (units) _____

Fresh Water
hardness ($CaCo_3$, mg/L) _____
pH (units) _____

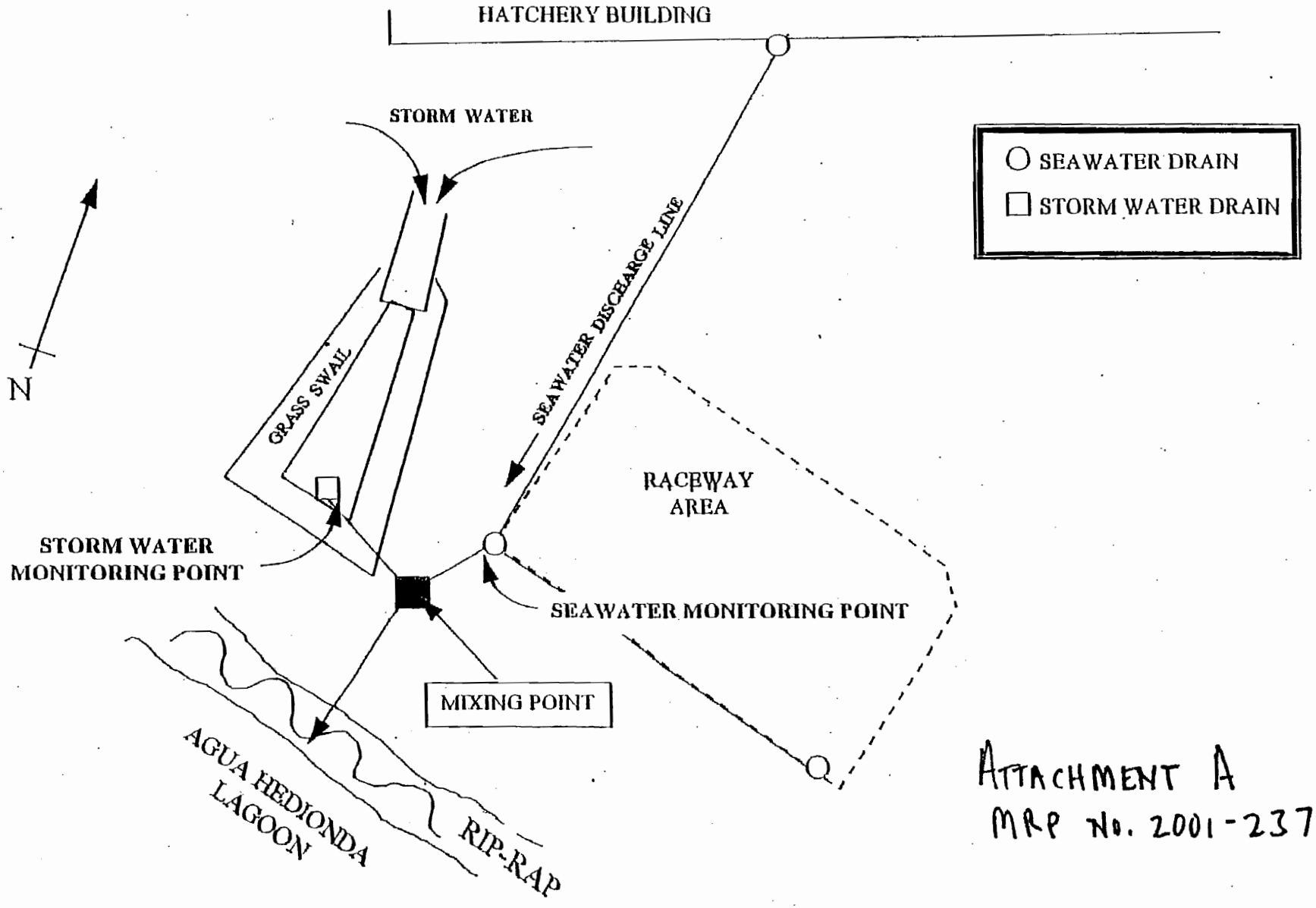
Table 3. Toxic Equivalency Factors (TEFs) for 2,3,7,8-TCDD Equivalents

Congener	TEF
2,3,7,8-TetraCDD	1
1,2,3,7,8-PentaCDD	1.0
1,2,3,4,7,8-HexaCDD	0.1
1,2,3,6,7,8-HexaCDD	0.1
1,2,3,7,8,9-HexaCDD	0.1
1,2,3,4,6,7,8-HeptaCDD	0.01
OctaCDD	0.0001
2,3,7,8-TetraCDF	0.1
1,2,3,7,8-PentaCDF	0.05
2,3,4,7,8-PentaCDF	0.5
1,2,3,4,7,8-HexaCDF	0.1
1,2,3,6,7,8-HexaCDF	0.1
1,2,3,7,8,9-HexaCDF	0.1
2,3,4,6,7,8-HexaCDF	0.1
1,2,3,4,6,7,8-HeptaCDF	0.01
1,2,3,4,7,8,9-HeptaCDF	0.01
OctaCDF	0.0001

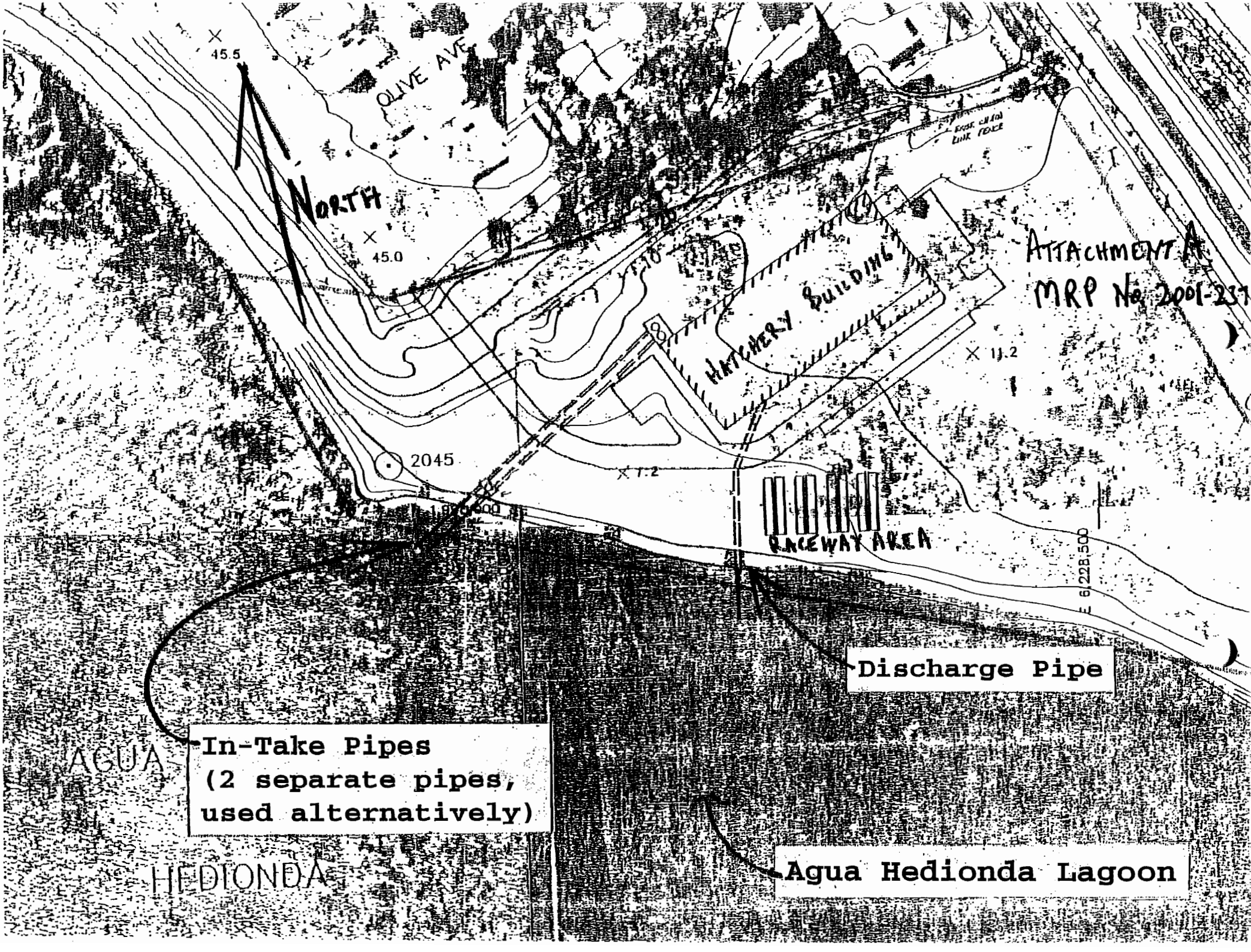
Attachment A

Sampling Location Diagrams

a. Discharge Monitoring Point
b. In-take and Receiving Water Monitoring Area, i.e. at the end of the in-take pipes



ATTACHMENT A
MRP No. 2001-237


ATTACHMENT A
MRP No. 2001-237
NORTH
OLIVE AVE
45.5
45.0
HATCHERY BUILDING
RACEWAY AREA
2045
11.2
7.2
Discharge Pipe
In-Take Pipes
(2 separate pipes,
used alternatively)
Agua Hedionda Lagoon
AGUA
HEDIONDA

FACT SHEET

FOR
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ORDER NO. 2001-237
NPDES PERMIT NO. CA0109355

WASTE DISCHARGE REQUIREMENTS

FOR

HUBBS-SEAWORLD
RESEARCH INSTITUTE

LEON RAYMOND HUBBARD, JR.
MARINE FISH HATCHERY

AGUA HEDIONDA LAGOON

SAN DIEGO COUNTY

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October 10, 2001

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FACILITY DESCRIPTION

The *Hubbs-SeaWorld Research Institute, Leon Raymond, Jr. Marine Fish Hatchery* (Fish Hatchery) is a non-profit research foundation funded and supervised by the *California Department of Fish and Game* to produce and release native marine species for the enhancement of commercially and recreationally important fishery populations. The reported annual harvestable weight for different cold water species is listed below.

Table 1. Reported Total Yearly Harvestable Weight

SPECIES	TOTAL YEARLY HARVESTABLE WEIGHT (pounds)
White Seabass	17,600
California Halibut	616
Giant Seabass	1,232
Miscellaneous Fish and invertebrates	110

The proposed discharge from the Fish Hatchery will consist of seawater taken from the Agua Hedionda Lagoon. Seawater is pumped from the Agua Hedionda Lagoon at a maximum rate 1.73 million gallons per day (MGD). The majority of the seawater (50-100%) is passed through rapid sand filters for particulate removal. The

seawater will flow to either the flow-through rearing systems where flow rates are adjusted to provide high quality waters or to the recirculating sea water system where the seawater is treated with additional filters, skimmers, and sterilizers to maintain high quality water. A line diagram of the proposed processes and facility operations is contained in *Attachment A*.

Settled materials including debris, fish wastes, and feed waste materials are siphoned daily from the flow-through pool system and rinsed into the sanitary sewer. Backwash waters from the filters for the recirculating seawater pool system are discharged to the sanitary sewer.

The Fish Hatchery proposes to discharge backwash waters from the rapid sand filters to the combined discharge of flow-through seawater system and the recirculating system. Prior to discharging the backwash waters to the combined discharge, the backwash water will be treated in a settling pond. The settled solids from the rapid sand filter's settling pond will be disposed of according to local and state regulations and will not be discharged to the Aqua Hedionda Lagoon.

Pursuant to the *NPDES Permit Rating Worksheet*, the proposed discharge from the Fish Hatchery has a point score of 44 and is classified as a *Minor Discharge*. Pursuant to *Title 23, Section 2200* of the California Code of Regulations the discharge has been identified as having a *Threat to Water Quality and Complexity* (TTWQ/CPLX) rating of 3b.

Because the discharge has the potential to cause an impact to the biological resources of the receiving waters, this Order contains *Receiving Water Limitations*, *Discharge Specifications*, and *Provisions* to prohibit adverse affect to the biological resources from the proposed discharge. Additionally, this Order requires monitoring of the discharge, receiving waters, and biological resources to evaluate potential impacts to the beneficial uses of the receiving waters.

LOCATION

The Fish Hatchery is located at 4200 Garfield Street, Carlsbad, California and is along the north shore of the outer Agua Hedionda Lagoon in the *Los Monos Hydrologic Subarea* (904.31) of the *Agua Hedionda Hydrologic Unit* (904.00). The Agua Hedionda Lagoon has three distinct sections, the inner lagoon, the middle lagoon, and the outer lagoon.

The inner lagoon is east of Interstate 5 and has recently had an infestation of *Caulerpa taxifolia*, an exotic species, which is

the object of an ongoing eradication effort by the Regional Board and other governmental agencies.

The middle lagoon is located between Interstate 5 and the railroad trestle for the coastal railroad.

The outer lagoon is between the railroad trestle and the Pacific Ocean. At the northwest corner of the lagoon, an engineered breakwater channel is open to the ocean.

The Encina Power Plant (owned by Cabrillo I LLC) maintains ocean circulation in Agua Hedionda Lagoon by periodically dredging the lagoon. The dredging is necessary to provide adequate flow for the cooling water intake, which is located along the south shore of the outer Agua Hedionda Lagoon. According to Waste Discharge Requirements for the Encina Power Plant, the maximum cooling water flow rate is approximately 857 MGD.

The *Carlsbad Aquaculture Farm* (owned by Mr. John Davis) is also located at the southwest corner of the outer Agua Hedionda Lagoon. The Aquaculture Farm uses the southern portion of the outer lagoon to grow mussels and shellfish for human consumption. The mussels are suspended on submerged lines in approximately 5-acres of the southern portion of the outer lagoon.

BACKGROUND

On June 1, 1994, this Regional Board adopted Monitoring and Reporting Program (MRP) No. 94-79 for the *Hubbs-SeaWorld Research Institute, Carlsbad Facility*. Pursuant to 40 CFR 122.24, Appendix C, *Criteria for Determining a Concentrated Aquatic Animal Production Facility* the discharge from the facility did not meet the criteria for a National Pollutant Discharge Elimination System (NPDES) permit. Since 1994, the Fish Hatchery has discharged its filter backwash waters to the sanitary sewer. Therefore, the MRP was adopted without Waste Discharge Requirements (WDR) or an NPDES permit.

On or about December 1999, the Fish Hatchery proposed to make changes to the operating procedures at its facility because the Encina Wastewater Authority (EWA) was concerned about the total dissolved solids (TDS) in the discharge from the Fish Hatchery to the EWA's sanitary sewer. The EWA's main concern was that the flow from the backwash water from the rapid sand filters at the Fish Hatchery may impact water reclamation requirements at the EWA. Cessation of the discharge of the backwash water from the rapid sand filters to the sanitary sewer is an important operating change for the Fish Hatchery and its proposed discharge.

On April 3, 2001, the Fish Hatchery submitted an NPDES application for the proposed discharge and on June 13, 2001, submitted supplemental information. Because the proposed changes to the operations at the Fish Hatchery will cause a material change in the character of the waste stream being discharged, an NPDES permit is being recommended for the facility.

BASIS FOR CONDITIONS IN THE TENTATIVE WASTE DISCHARGE REQUIREMENTS (WDR)

Enclosed Bay and Estuary Policy, non-municipal waste discharge

The State Water Resources Control Board (hereinafter State Board) adopted a *Water Quality Control Policy for Enclosed Bays and Estuaries of California* (*Bays and Estuaries Policy*) on May 16, 1974. The *Bays and Estuary Policy* establishes principles for management of water quality, quality requirements for waste discharges, discharge prohibitions, and general provisions to prevent water quality degradation and to protect the beneficial uses of waters of enclosed bays and estuaries. These principles, requirements, prohibitions, and provisions have been incorporated into this Order.

The *Bays and Estuaries Policy* contains the following principle for management of water quality in enclosed bays and estuaries, which includes San Diego Bay:

> *The discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries 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. For the purpose of this policy, treated ballast waters and innocuous nonmunicipal wastewater such as clear brines, washwater, and pool drains are not necessarily considered industrial process wastes, and may be allowed by Regional Boards under discharge requirements that provide protection to the beneficial uses of the receiving water.*

For the purpose of the *Bays and Estuaries Policy* and the tentative WDR, the discharge of flow-through sea water, recirculated seawater, and clarified backwash waters from the rapid sand filters will be considered innocuous nonmunicipal wastewaters and, as such, will not be considered industrial

process wastes. Therefore, the discharges of such wastes may be allowed by the Regional Board under waste discharge requirements that provide protection of the beneficial uses of the receiving waters.

Beneficial Uses of Agua Hedionda

The Basin Plan (p. 2-47, *Table 2-3. Beneficial Uses of Coastal Waters*) established the following beneficial uses for the waters of Agua Hedionda Lagoon:

a. Industrial Service Supply
b. Navigation
c. Contact Water Recreation
d. Non-contact Water Recreation
e. Commercial and Sport Fishing
f. Estuarine Habitat
g. Wildlife Habitat
h. Rare, Threatened, or Endangered Species
i. Marine Habitat
j. Aquaculture
k. Migration of Aquatic Organisms
l. Shellfish Harvesting

California Toxics Rule and Implementation Policy

On May 18, 2000, the U.S. Environmental Protection Agency (USEPA) promulgated the final California Toxic Rule (CTR), 40 CFR 131.38. The CTR restored California's water quality standards for inland surface waters. The previous inland surface waters plan, which contained water quality criteria for priority toxic pollutants, was dismissed in 1994 when a State court overturned the State Board's plan.

The water quality criteria established in the CTR, 40 CFR 131.38, is legally applicable in the State of California for inland surface waters, and enclosed bays and estuaries for all purposes and programs under the Clean Water Act.

On March 2, 2000, the State Board, in *Resolution No. 2000-15*, adopted a *Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (Implementation Policy). The Implementation Policy implements the criteria for the 126 priority pollutants in the CTR. The State Board's Implementation Policy was effective on April 28, 2000.

The Implementation Policy establishes:

a) implementation provisions for priority pollutant criteria promulgated by the USEPA through the National Toxic Rule (NTR) and the CTR, and for priority pollutant objectives established in the Basin Plan;

b) monitoring requirements for 2,3,7,8-TCDD (tetrachlorodibenzo-p-dioxin) equivalents; and

c) Chronic toxicity control provisions.

Pursuant to Section 2.2.2.A of the Implementation Policy the Regional Board shall require the discharger to collect data to determine if effluent limits are necessary. In order to evaluate the reasonable potential for priority pollutants, the tentative WDR and tentative Monitoring and Reporting Program (MRP) requires the discharger to analyze its discharge and the receiving waters for priority pollutants, and to submit the data to the Regional Board prior to May 10, 2002.

Once the monitoring for the priority pollutants is submitted to and evaluated by the Regional Board, the Regional Board may either;

- request additional priority pollutant monitoring pursuant to Section 13267 of the Porter-Cologne Water Quality Control Act,
- determine that there is no reasonable potential for the discharge to cause an exceedence of the water quality criteria
- reopen the tentative WDR and recommend discharge limits for priority pollutants in the discharge that have a reasonable potential to cause an exceedence of the water quality criteria.

Pursuant to *Section 1.4.4 Intake Water Credits* (p.17) of the Implementation Policy, a Regional Board may consider priority pollutants in the intake water on a pollutant-by-pollutant and discharge-by-discharge basis when establishing water quality-based effluent limitations. The proposed discharge from the Fish Hatchery may qualify for Intake Water Credits.

Exceptions to the Implementation Policy

In its NPDES application and RWD, the Fish Hatchery has asked to be exempt from the requirements of the CTR. Section *5.3 Exceptions* (pp. 32-34) of the Implementation Policy contains provisions for the granting of categorical, and case-by-case exceptions to the Implementation Policy. One categorical exception is for *resource management*, such as a fish hatchery.

The categorical exception is for *short-term* or *seasonal* exceptions and *to fulfill statutory requirements*.

For the proposed discharge from the Fish Hatchery, the discharge is not *short-term*, *seasonal*, or conducted *to fulfill statutory requirements*. Therefore, Section 5.3 of the Implementation Policy does not apply to the proposed discharge. The Fish Hatchery must conduct monitoring requirements pursuant to the Implementation Policy as specified in the tentative WDR Order No. 2001-237 and tentative MRP No. 2001-237.

The case-by-case exception allowed by the Implementation Policy is for those discharges to a water body where the site-specific conditions differ sufficiently from statewide conditions and those differences cannot be addressed through other provisions of the Implementation Policy.

The site-specific conditions for an exception to the Implementation Policy has not been developed for the Aqua Hedionda Lagoon, nor are site-specific conditions for an exception likely to be developed.

Chemical considerations

Since 1994, the Fish Hatchery has been implementing *Monitoring and Reporting Program No. 94-79*, which required monitoring for the following items:

Acute toxicity
Chronic toxicity
Flow
Suspended solids
Settable solids
Turbidity
pH
Total ammonia
Un-ionized ammonia

Because the Fish Hatchery proposes to discharge the backwash waters from the rapid sand filters to the Aqua Hedionda Lagoon, the total suspended solids (TSS) concentration in the proposed discharge has the potential to impact to water quality. The Fish Hatchery proposes to treat the backwash waters by settling the solids in a settling basin prior to being discharged.

In order to minimize the TSS load from the Fish Hatchery, the tentative WDR requires a minimum removal rate of 50% of the TSS be maintained at the discharge from the settling basin when compared to the influent to the settling basin (i.e. a 50%

removal of TSS from the backwash water from the rapid sand filters). The tentative MRP requires monitoring of the TSS when entering the settling basin and when discharging from the settling basin. In order to evaluate the potential impact from the combined discharge, TSS monitoring is required of the combined discharge and of the receiving waters in the vicinity the intake pipe.

The NPDES application identified four treatment strategies used at the Fish Hatchery for disease control and stress management. The Regional Board's review of the NPDES application identified the use of copper sulfate ($CuSO_4$) as having the potential to exceed the water quality criteria for copper. The NPDES application indicated that the copper concentration for a fish-bath treatment process was approximately 250-500 μg/L.

The Regional Board requested a demonstration that the copper concentration in the discharge would not be greater than the water quality criteria of 3.1 μg/L. The Regional Board noted that the effort to achieve compliance with the water quality criteria for copper would be substantial and recommended that alternative disposal methods for the wastes containing copper be considered. In the supplemental information for the NPDES application, the Fish Hatchery proposed to discharge the fish-bath wastes containing the $CuSO_4$ treatment to the sanitary sewer.

In order to evaluate the copper concentrations in the proposed discharge and in the receiving waters, the tentative WDR requires monitoring for copper in the proposed discharge and in the receiving waters.

Nutrients

The Fish Hatchery currently has processes and operating procedures to control ammonia concentration in the discharge by converting the ammonia to nitrate. Pursuant to MRP No. 94-79 the Fish Hatchery has been monitoring the ammonia concentration in its discharge. The monitoring data indicates that the ammonia concentrations have not been a concern.

Aquaculture operations have been identified by the USEPA as a potential source of nutrient pollutants. The National assessments of water quality have identified siltation, nutrients, and pathogens as a major cause of water quality impairments.

The USEPA is examining the cost and performance of technologies and practices available for the control of nutrient pollutants from aquaculture operations to possibly develop pollutant

controls for establishing *Effluent Limit Guidelines* (ELG) for discharges from aquaculture facilities. The USEPA is gathering cost information from the various aquaculture facilities that respond to the USEPA questionnaires. The efforts by the USEPA may or may not lead to the promulgation of ELG, that is, minimum, national technology-based standards of performance for point source discharges from specific industrial categories (e.g. aquatic animal production facilities).

In order to evaluate the potential nutrient load from the Fish Hatchery, the tentative WDR and tentative MRP will require effluent and receiving water monitoring for total Kjeldahl nitrogen, organic nitrogen, ammonia, nitrite, nitrate, total phosphorus, and orthophosphate.

By requiring comprehensive monitoring for chemicals associated with nutrient pollutants, the Regional Board will be able to determine if addition discharge limits will be necessary in subsequent revision to the tentative WDR.

The information collected pursuant to the tentative MRP will allow the Fish Hatchery to evaluate the discharge and the receiving water quality criteria for nutrients. The Fish Hatchery can adjust the processes and procedures at its facility to ensure that the beneficial uses of outer Aqua Hedionda Lagoon are protected.

Metals

The Fish Hatchery submitted data in its NPDES application that indicated that the water quality criteria for copper is exceeded in the outer Aqua Hedionda Lagoon. The tentative MRP requires monitoring for copper and zinc in the effluent and in the receiving waters. The monitoring will be used to evaluate the discharge and the water quality in the lagoon, and any potential impact from the discharge.

Additionally, the Implementation Policy for the CTR requires a reasonable potential analysis for 126 priority pollutants. The 126 priority pollutants listed in the CTR includes 15 metals. An analysis of metal concentrations will be conducted when the priority pollutants sampling for the CTR is completed.

Sampling location

The monitoring point and compliance sampling point is located at the flow-through pool system area, which is up gradient of the point where the combined discharge will commingle with storm

water. The compliance sampling point is at latitude 33° 08′ 40″ north and longitude 117° 20′ 39″ west. The combined discharge flows from the facility to the outer Aqua Hedionda Lagoon through an 18 inch diameter PVC pipe that extends approximately 10 feet off shore at an approximate elevation of -4 feet from the footpath elevation. Storm water from the surrounding area also flows through the discharge pipe. The location of the combined discharge sampling and the receiving water location sampling are shown in *Attachment B*.

Storm water discharges

Section 402(p) of the CWA (33 U.S.C. Section 1342(p)), and regulations adopted by the USEPA (40 CFR Section 122.26) require that facilities which discharge storm water associated with industrial activity be regulated by NPDES permit. The Fish Hatchery is not included in the 40 CFR 122.26 specifications for an industrial activity.

The State Board's General NPDES Permit No. CAS000001 for industrial activity does not apply to this facility. The tentative WDR does not include storm water requirements.

Toxicity

The Basin Plan includes the following narrative as a water quality objective, which is applicable to the discharge:

Water Quality Objectives for Toxicity:

All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the Regional Board.

The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge or, when necessary, for other control water that is consistent with requirements specified in U.S. EPA, State Water Resources Control Board or other protocol authorized by the Regional Board. As a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour acute bioassay.

In addition, effluent limits based upon acute bioassays of effluents will be prescribed where appropriate, additional numerical receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances will be encouraged.

To ensure the protection of the beneficial uses of the lagoon, toxicity requirements and monitoring are included in the tentative WDR.

The toxicity specifications in the tentative WDR are based upon the specifications listed in the 1997 Ocean Plan. The use of the Ocean Plan for the toxicity specifications required in the tentative WDR is consistent with the toxicity requirements listed in the Implementation Policy (p. 29).

Prohibitions

The applicable prohibitions from the Basin Plan, the Ocean Plan, and the Enclosed Bays and Estuary Policy were incorporated into the tentative WDR and tentative MRP. As noted previously, the Basin Plan and the Enclosed Bays and Estuary Policy directly apply to the proposed discharge. Therefore, the prohibitions found in each of these documents also apply to this discharge and were incorporated into the tentative WDR.

PUBLIC HEARING

Tentative WDR No. 2001-237 will be considered by the San Diego Regional Board at a public hearing on:

October 10, 2001 beginning at 0900 at the following location:

Metropolitan Wastewater Department
Auditorium
9192 Topaz Way
San Diego, California

WASTE DISCHARGE REQUIREMENTS REVIEW

Any person may petition the State Board to review the decision of the Regional Board regarding the final WDR. A petition must be made within 30 days of the Regional Board hearing.

FOR ADDITIONAL INFORMATION

For additional information regarding tentative WDR Order No. 2001-237, interested persons may write to the following address or call Mr. Paul J. Richter of the Regional Board staff at (858) 627-3929.

Regional Water Quality Control Board, San Diego
9174 Sky Park Court
San Diego, California 92123-4340
e-mail: richp@rb9.swrcb.ca.gov

REFERENCES

1. Report of Waste Discharge, Hubbs-SeaWorld Research Institute, March 30, 2001, June 13, 2001, and supplemental information.

2. Regional Board file #12-0577.02/03.

3. *Water Quality Control Plan for the San Diego Basin* (9), 1994, as amended (Basin Plan).

4. California Toxics Rule, 40 CFR 131.38.

5. *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (Phase I of the Inland Surface Waters Plan and the Enclosed Bays and Estuaries Plan) 2000, State Water Resources Control Board.

6. USEPA NPDES Permit Writers' Manual, EPA/833/B-96/003, December 1996.

7. USEPA, Office of Water, Fact Sheet, EPA-821-F-00-002, *EPA Expands Focus on Nutrient Pollution*, February 2000, and documents related to Aquatic Animal Production Industry.

8. *Marine Aquaculture in the United States,* Pew Oceans Commission, by Rebecca J. Goldburg, Matthew S. Elliot, Rosamond L. Naylor, 2001.

Attachment A

Water Flow Schematic

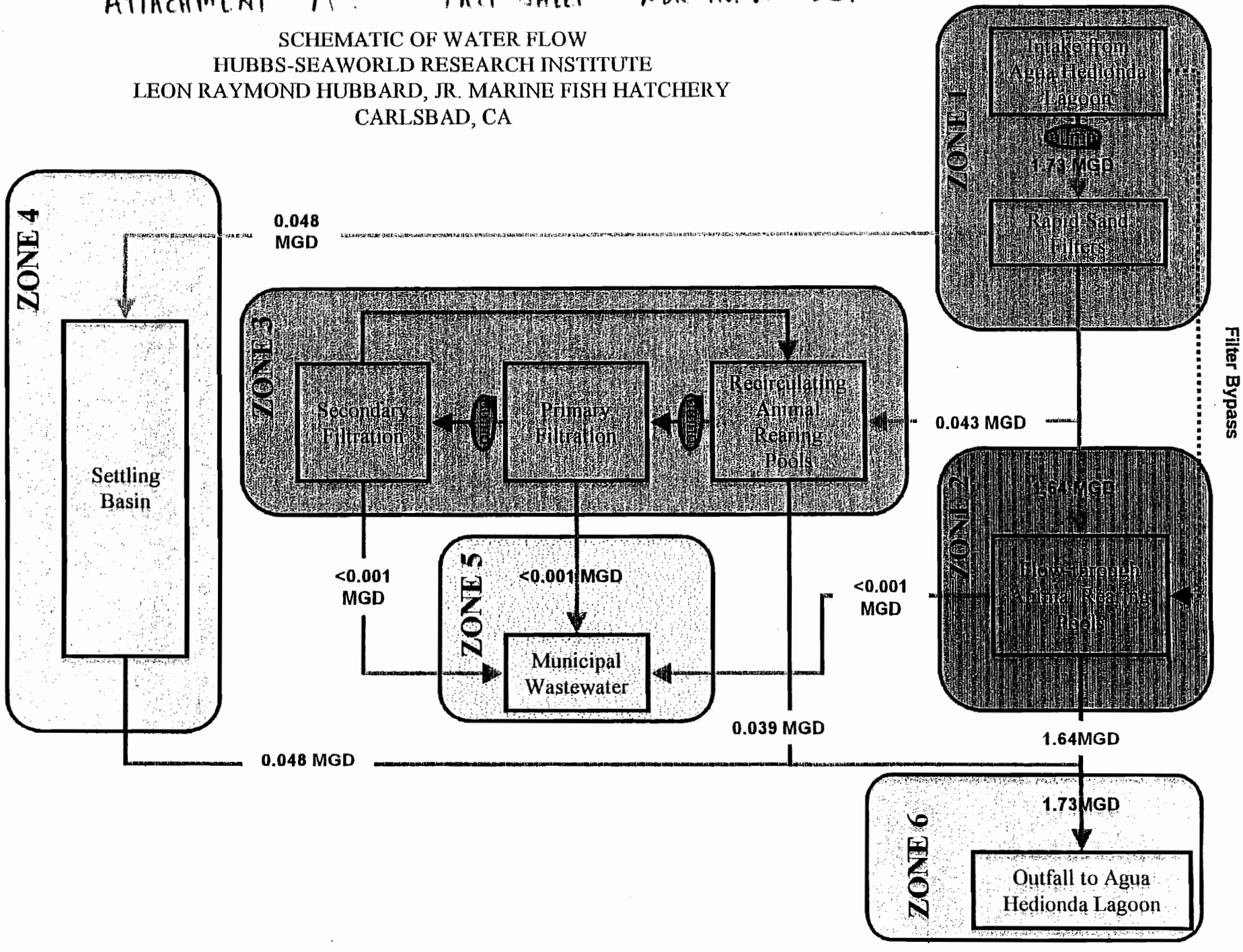
for

Leon Raymond Hubbard, Jr.

Marine Fish Hatchery

ATTACHMENT A. FACT SHEET WDR No. 2001-237

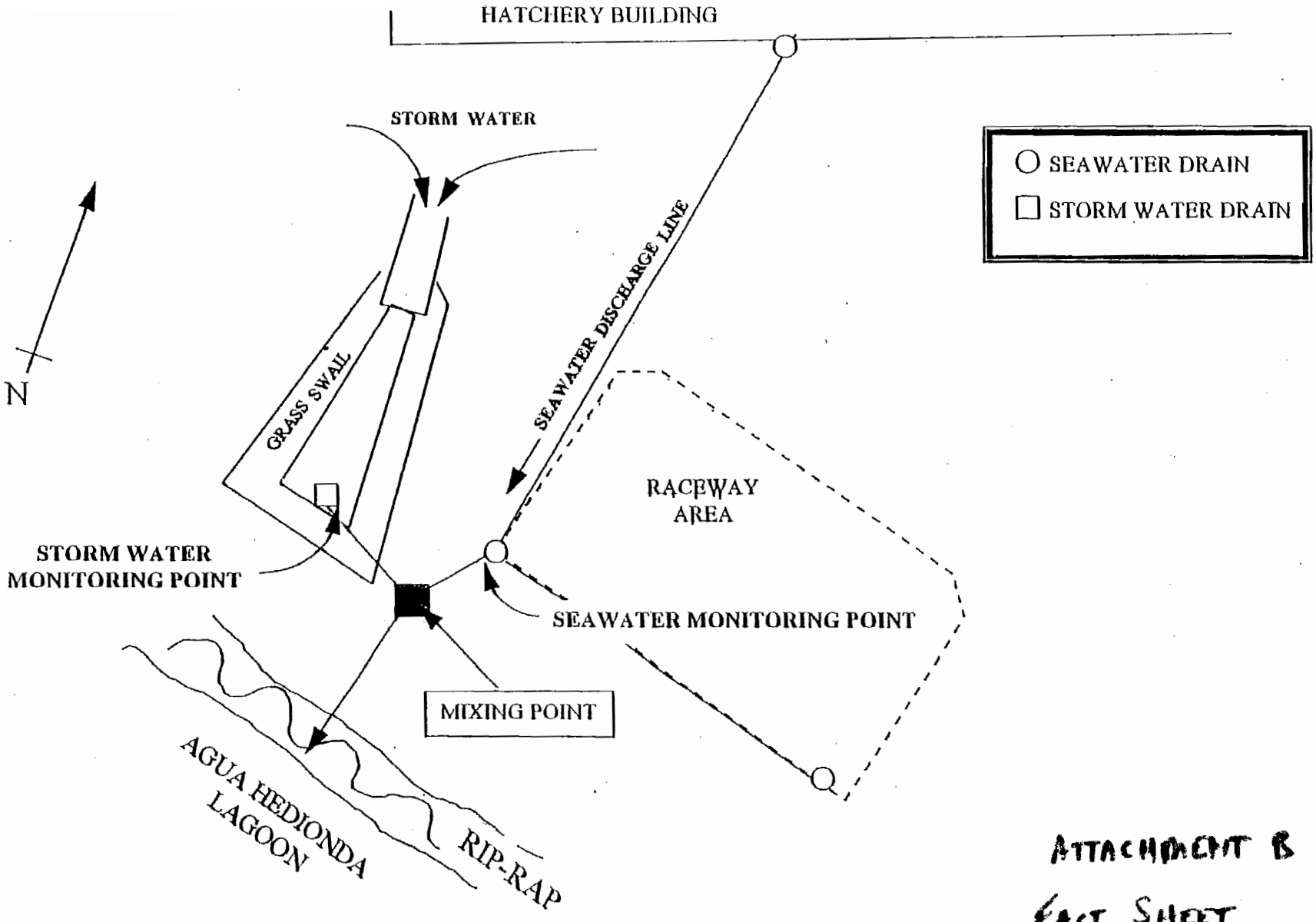
SCHEMATIC OF WATER FLOW
HUBBS-SEAWORLD RESEARCH INSTITUTE
LEON RAYMOND HUBBARD, JR. MARINE FISH HATCHERY
CARLSBAD, CA



Attachment B

Sampling Location Diagrams

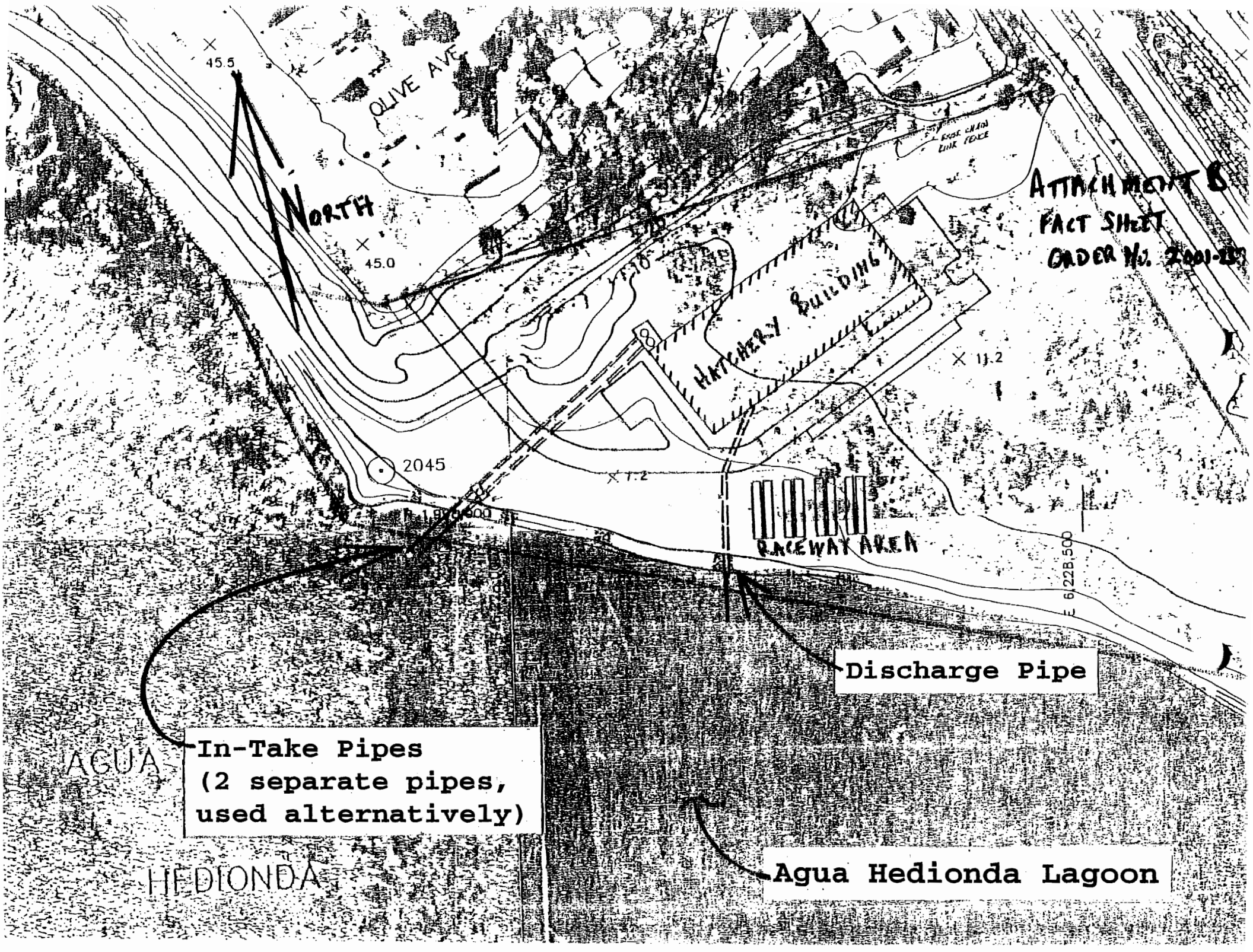
a. Discharge Monitoring Point
b. In-take and Receiving Water Monitoring Area, i.e. at the end of the in-take pipes



ATTACHMENT B

FACT SHEET

ORDER 2001-237


ATTACHMENT B
FACT SHEET
ORDER No. 2001-
NORTH
OLIVE AVE
45.5
45.0
2045
HATCHERY BUILDING
RACEWAY AREA
11.2
7.2
Discharge Pipe
In-Take Pipes
(2 separate pipes,
used alternatively)
Agua Hedionda Lagoon
AGUA
HEDIONDA