CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ORDER NO. 98-21

WASTE DISCHARGE REQUIREMENTS
FOR
TELEDYNE RYAN AERONAUTICAL

CLOSURE AND POST-CLOSURE MAINTENANCE
OF THE
CONVAIR LAGOON SAND CAP
SAN DIEGO BAY

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

1. On October 17, 1986, the Regional Board Executive Officer issued "Cleanup and Abatement Order No. 86-92 for Teledyne Ryan Aeronautical near Lindbergh Field, San Diego County" for the discharge of PCBs, several trace metals, and volatile organic compounds to the storm drains on Teledyne Ryan Aeronautical property and to the Convair Lagoon portion of San Diego Bay. Cleanup and Abatement Order No. 86-92 required the sampling and cleanup of certain storm drain lines and sumps located on Teledyne Ryan Aeronautical property. Addenda Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 to Cleanup and Abatement Order No. 86-92 were issued by the Regional Board Executive Officer to establish additional sampling requirements, to establish a cleanup level and time schedule, and to extend the time schedule.

2. Cleanup and Abatement Order 86-92, as amended, requires Teledyne Ryan Aeronautical to construct a sand cap to isolate the contamination in Convair Lagoon from the environment. The sand cap was constructed such that sediment with PCB concentrations of 4.6 mg/kg (dry weight) or greater are covered. Sediment PCB concentrations in the lagoon were found to range from less than 1 mg/kg to 1,800 mg/kg dry weight at sediment depths from the surface to 10 feet deep. Construction of the sand cap is expected to be complete by the middle of May 1998.

3. On April 15, 1997, Teledyne Ryan Aeronautical (TRA) submitted a report of waste discharge for the Convair Lagoon Sand Cap (sand cap). Additional information on the Convair Lagoon Sand Cap is contained in the March 1995 "Convair Lagoon Capping Project Preliminary Plan" and the October 1995 "Convair Lagoon Capping Project Final Design Basis of Design Report." This Order regulates the sand cap and monitoring, maintenance, and repair activities associated with the sand cap.

4. The sand cap covers approximately 7 acres of San Diego Bay bottom. The sand cap is divided into three parts: the main cap covering sediment with at least 4.6 mg/kg PCB, the

thin cap which transitions between the main cap and the shore topography, and the outer cap which covers areas less than 4.6 mg/kg PCB outside the perimeter berm. See Figure 1.

5. The main cap in Convair Lagoon consists of a geogrid on the existing sediment, a minimum of one foot of gravel on the geogrid, and a minimum of two feet of sand on the gravel. The geogrid provides separation between the existing sediments and the gravel. The gravel layer is provided to prevent animals from burrowing into contaminated sediment. The sand layer isolates the contaminated sediment and provides habitat for plants and animals. The perimeter berm provides containment for the main cap and acts as a physical barrier limiting boat traffic and erosive currents/waves. The perimeter berm is approximately five feet high with 3:1 (horizontal:vertical) sideslopes and is constructed of rock riprap.

6. The thin cap is used to transition between the main cap and the existing topography. The thickness of the thin cap at the PCB boundary lines indicated on Figures 1 and 2 is equal to the thickness of the main cap and tapers shoreward to a thickness of 4 inches of sand over 4 inches of gravel on the existing sediment. The thin cap is only used on areas that have PCB concentrations less than 4.6 mg/kg (dry weight).

7. The outer cap is outside the perimeter berm in areas less than 4.6 mg/kg PCB and consists of 3 feet of sand placed directly on existing sediment for a distance of 50 feet from the toe of the perimeter berm. Beyond 50 feet, the outer cap tapers off at a rate of natural repose of sand.

8. There are four major storm drains which discharge in the vicinity of Convair Lagoon: a 60-inch storm drain pipe under the existing pier, a 54-inch storm drain pipe near the old General Dynamics facility, a 30-inch storm drain just west of the perimiter berm, and a 30-inch storm drain pipe just east of the 60-inch storm drain. Each pipe has been provided with erosion protection, such as riprap, placed at the terminus. See Figure 2.

9. The majority of the sand cap is submerged. Approximately 1,400 square feet of intertidal land has been converted to upland as a result of this project. The remaining area is intertidal or below.

10. Surveying monuments to be used to determine the location and elevation of the sand cap include:

    1) San Diego Unified Port District point N205,601.01 E1,712,907.53
    2) San Diego Unified Port District point N205,724.73 E1,712,445.82

11. The site is located approximately 4,000 feet to the southwest of the Rose Canyon fault zone. The Spanish Bight fault, a fault strand within the Rose Canyon zone, has been inferred to be within 1,320 feet of the site. Other recognized active faults include the Coronado Banks fault system about 11 miles to the southwest and the Elsinore fault system about 42 miles to the northeast. No large earthquakes have been associated with the Rose Canyon fault during historic times. The Spanish Bight fault is considered active.

12. The sand cap must be monitored, maintained, and repaired in future years to ensure that the PCBs continue to be contained by the sand cap and water quality is not adversely affected. Teledyne Ryan Aeronautical must provide assurances of financial responsibility to ensure that funds are available to maintain, monitor, and repair the sand cap in future years in the event that Teledyne Ryan Aeronautical fails or refuses to respond in meeting obligations associated with the sand cap. Financial assurance is also required by an addendum to the Environmental Impact Report and by California Code of Regulations Title 23, Division 3, Chapter 15. The report of waste discharge submitted on April 15, 1997 states that Teledyne Ryan Aeronautical will secure a Letter of Credit in the amount of two million dollars for repair, monitoring, and maintenance of the cap. Two million dollars is anticipated to be sufficient to satisfy the financial assurance requirement at this time.

13. Pursuant to California Code of Regulations Title 23, Division 3, Chapter 15 (Chapter 15), Section 2511(d), remedial actions intended to contain wastes at the place of release are required to implement applicable provisions of Chapter 15 to the extent feasible. By letter dated July 20, 1995, Teledyne Ryan Aeronautical was informed that applicable provisions of Chapter 15 must be implemented for the sand cap to the extent feasible. By letter dated February 25, 1997, Regional Board staff identified sections from Chapter 15 which are applicable to the sand cap. This Order implements the applicable sections from Chapter 15.

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

15. The Basin Plan identifies the following beneficial uses of San Diego Bay to be protected:

    a. Industrial service supply
    b. Navigation

c. Contact water recreation
d. Noncontact water recreation
e. Commercial and sport fishing
f. Preservation of biological habitats of special significance
g. Estuarine habitat
h. Wildlife habitat
I. Rare, threatened, or endangered species
j. Marine habitat
k. Migration of aquatic organisms
l. Shellfish harvesting

16. The San Diego Unified Port District has prepared and certified a final Environmental Impact Report (EIR) dated October 1993, with Addenda No. 1, No. 2 and No. 3, in accordance with the California Environmental Quality Act (CEQA) [Public Resources Code, Division 13, Chapter 3, Section 21000 et seq.]. The sand cap, as approved by the San Diego Unified Port District, will not have a significant adverse effect on the environment.

17. The 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 water;
e. Environmental characteristics of the receiving waters under consideration, including the quality of those receiving waters;
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;
h. The need for developing housing within the region; and
i. The need to develop and use recycled water. (California Water Code 13263 and 13241)

18. For the purposes of these waste discharge requirements, the term "discharge of wastes" or similar terms shall include the disposal of PCB contaminated sediment in the Convair Lagoon Sand Cap and any release of PCBs from the Convair Lagoon Sand Cap.

19. On March 27, 1998, the Regional Board notified Teledyne Ryan Aeronautical and all known interested parties of its intent to issue this Order for the Convair Lagoon Sand Cap. (CWC 13378 and 13384)

20. The Regional Board at a public meeting on May 13, 1998 provided an opportunity for a public hearing and heard and considered all comments pertaining to this Order for the Convair Lagoon Sand Cap. (CWC 13378 and 13384)

IT IS HEREBY ORDERED THAT Teledyne Ryan Aeronautical (hereinafter discharger), in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. Discharges of wastes to lands or waters which have not been specifically described to the Regional Board and for which valid Waste Discharge Requirements are not in force are prohibited.

2. The discharge of wastes and the Convair Lagoon Sand Cap shall not cause:
   a. The occurrence of objectionable tastes or odors in San Diego Bay water or fish;
   b. The presence of toxic materials in waters or sediment of San Diego Bay; and
   c. Pollution, contamination, or nuisance or adversely affect the beneficial uses of San Diego Bay as established in the Basin Plan.

3. The Convair Lagoon Sand Cap shall not cause a violation of any Basin Plan prohibition or any water quality objective established for San Diego Bay. The relevant sections from the Basin Plan are contained in Attachment No. 1 to this Order.

B. MAINTENANCE SPECIFICATIONS

1. The sand cap shall be maintained such that sediments in Convair Lagoon containing PCB concentrations in excess of 4.6 mg/kg (dry weight) are contained below the main sand cap.

2. The main sand cap shall be maintained at a minimum thickness of three feet including one foot of gravel and two feet of sand. Additional sand and/or gravel shall be added to any area where the main sand cap thickness is less than two and a half feet to maintain a minimum 3 foot total thickness. If visual inspections indicate the thickness of the sand layer in the main cap has diminished to less than 18 inches, additional sand shall be placed to raise the sand thickness back to 24 inches. The cap shall be repaired as expeditiously as practical. Waste discharge requirements may be necessary for a discharge of sand and/or gravel greater than 5,000 cubic yards.

3. If any of the long-term monitoring elements described in the Monitoring and Reporting Program suggest that the sand cap has been breached or recontaminated, additional sampling may be necessary and repair work to the cap may be warranted.

4. The action level for repair work on the cap shall be 4.6 mg/kg (dry weight) in the sediment.

5. All storm drains to Convair Lagoon shall be provided with adequate energy dissipation and erosion control measures to maintain structural integrity of the sand cap.

6. If sediment in the 60-inch or 30-inch storm drains and the respective nearest upstream catch basin is found to exceed 4.6 mg/kg (dry weight) by the storm drain sampling described in Section E of Monitoring and Reporting Program No. 98-21, the storm drain(s) shall be cleaned to remove sediment containing PCBs that was caused or permitted to be discharged or deposited by Teledyne Ryan Aeronautical. Storm drain cleaning is not required if the upstream catch basin sediment is below 4.6 mg/kg.

7. If the sediment sampling, as described in Section C of Monitoring and Reporting Program 98-21, indicates a potential breakthrough of PCBs from the sediment below the main sand cap, repair and/or investigation shall begin within 72 hours. The minimum action level for repair and/or investigation is 4.6 mg/kg (dry weight) PCBs in the sediment. The Regional Board Executive Officer may also require repair and/or investigation as reasonably necessary.

8. The structural integrity of the perimeter berm shall be maintained as necessary to correct the effect of settlement, erosion, vessels, or other adverse factors that threaten the berm's structural integrity. If visual inspections indicate unacceptable erosion, settlement, or other damage to the berm, additional rock shall be placed to return the berm to its design dimensions.

9. All navigational warning signs shall be maintained in good condition. The anchoring piles shall be stable and the signs shall be intact, legible, and firmly attached to the piles.

10. At least two permanent surveying monuments shall be maintained from which the location and elevation of the sand cap and perimeter berm can be determined throughout the post-closure maintenance period.

11. Eelgrass shall be planted and maintained in accordance with the procedures and schedule contained in the Eelgrass Mitigation Plan, which is expected to be finalized by June 1, 1998, as administered by the U.S. Army Corps of Engineers. A copy of this final plan shall be submitted to the Regional Board by September 1, 1998.

12. By November 30, 1998, Teledyne Ryan Aeronautical shall provide assurances of financial responsibility in an amount sufficient to provide for repair, monitoring, and maintenance of the Convair Lagoon Sand Cap, which funding shall become available to the Regional Board upon a determination that the discharger has failed or refused, or is failing or refusing, or threatens to fail or refuse, to comply with the requirements of this order or any order issued by the Regional Board to enforce obligations associated with the sand cap and the PCBs contained by the sand cap. This financial assurance shall be irrevocable and accessible by the Regional Board regardless of approval from Teledyne Ryan Aeronautical.

C. STANDARD PROVISIONS

1. *Duty to Comply:* The discharger must comply with all conditions of this Order. Any noncompliance with this Order constitutes a violation of the California Water Code and is grounds for (a) enforcement action; (b) termination, revocation and reissuance, or modification of this Order; or (c) denial of a report of waste discharge in application for new or revised waste discharge requirements.

2. *Entry and inspection:* The discharger shall allow the Regional Board, or an authorized representative, upon 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 operations 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 California Water Code, any substances or parameters at any location.

3. *Proper Operation and Maintenance:* The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate laboratory and process controls including appropriate quality assurance procedures.

4. *Change in Ownership:* This Order is not transferable to any person except after notice to the Executive Officer. The discharger shall submit this notice in writing at least 30 days in advance of the proposed transfer. 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 from the transfer date on. The 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.

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

6. *Termination or modification of waste discharge order*: This waste discharge order may be terminated or modified for cause, including, but not limited to, all of the following:

   a. Violation of any condition contained in this waste discharge order.

   b. Obtaining this waste discharge order by misrepresentation, or failure to disclose fully all relevant facts.

7. *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.

8. *Material change*: The discharger shall file a new Report of Waste Discharge not less than 120 days prior to any material change in the character, location, or volume of the waste discharge, including, but not limited to, the following:

   a. Significant change in disposal method or change in the method of treatment which would significantly alter the characteristics of the waste.

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

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

d. Any planned change in the regulated facility or activity which may result in noncompliance with this Order.

9. *Availability*: A copy of this Order shall be maintained at the local offices of the discharger and shall be available to operating personnel at all times.

10. *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.

11. *Compliance:* In an enforcement action, it shall not be a defense for the discharger that it would have been necessary to halt or reduce the waste discharge ordered activity in order to maintain compliance with this Order.

12. *Effective date*: This Order shall become effective on the date of adoption by the Regional Board.

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

D. REPORTING AND RECORD KEEPING REQUIREMENTS

1. *Monitoring and Reporting Program*: The discharger shall conduct monitoring and submit reports in accordance with this Order and Monitoring and Reporting Program (MRP) No. 98-21. Monitoring results shall be reported at the intervals specified in this Order and MRP No. 98-21. [CWC 13267 and 13383, 23 CCR 2230]

2. *General Reporting Requirement:* The discharger shall furnish to the Executive Officer of this Regional Board, within a reasonable time, any information which the Executive Officer may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The discharger shall also furnish to the Executive Officer, upon request, copies of records required to be kept by this Order.

3. *Retention of records:* The discharger shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of

any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

4. *Incomplete Reports:* Where the discharger becomes aware that it failed to submit any relevant facts or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information.

5. *Report Declaration:* All applications, reports, or information submitted to the Executive Officer shall be signed and certified as follows:

a) The Report of Waste Discharge shall be signed as follows:

1) For a corporation - by a principal executive officer of at least the level of vice-president.

2) For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.

3) For a municipality, state, federal or other public agency - by either a principal executive officer or ranking elected official.

b) All other reports required by this Order and other information required by the Executive Officer shall be signed by a person designated in paragraph (a) of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if all of the following are true:

1) The authorization is made in writing by a person described in paragraph (a) of this provision,

2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity and

3) The written authorization is submitted to the Executive Officer.

c) Any person signing a document under this Section shall make the following certification,

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant

penalties for submitting false information, including the possibility of fine and imprisonment."

6. *Endangerment of Health and Environment:* The discharger shall report any noncompliance which may endanger health or the environment. Any such information shall be provided orally to the Executive Officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer, 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.

7. *Hazardous Releases:* Except for a discharge which is in compliance with these waste discharge requirements, any person who, without regard to intent or negligence, causes or waste discharge orders any hazardous substance or sewage to be discharged in or on any waters of the State, shall as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Director of Environmental Health Services, County of San Diego in accordance with California Health and Safety Code Section 5411.5 and the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the State Board or the appropriate Regional Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of Section 13271 of the Water Code unless the discharger is in violation of a prohibition in the applicable Water Quality Control Plan.

8. *Reports and notifications*: The discharger shall submit reports and provide notifications to the Regional Board as specified in this Order. Reports shall be submitted and notifications shall be made to:

Executive Officer
Attn: Planning and Services Unit
California Regional Water Quality Control Board, San Diego Region
9771 Clairemont Mesa Boulevard, Suite A
San Diego, CA 92124-1324

Phone - (619) 467-2952
Fax - (619) 571-6972

E. NOTIFICATIONS

1. *Vested Rights:* 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, nor protect the discharger from liability under federal, state or local laws, nor create a vested right for the discharger to continue the waste discharge.

2. *U.S. EPA Review:* These requirements have not been officially reviewed by the United States Environmental Protection Agency and are not issued pursuant to Section 402 of the Clean Water Act.

3. *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.

4. *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)]

5. *Civil Monetary Remedies:* The California Water Code provides that any person who intentionally or negligently violates any waste discharge requirements issued, reissued, or amended by this Regional Board is subject to a civil monetary remedy of up to 20 dollars per gallon of waste discharged or, if a cleanup and abatement order is issued, up to 15,000 dollars per day of violation or some combination thereof.

6. *Penalties for Investigation, Monitoring, or Inspection Violations:* The California Water Code provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this Order, or falsifying any information provided in the monitoring reports is guilty of a misdemeanor and is subject to a civil liability of up to 5,000 dollars for each day in which the violation occurs.

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 May 13, 1998.

John H. Robertus

JOHN H. ROBERTUS
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ATTACHMENT NO. 1 TO ORDER NO. 98-21
WASTE DISCHARGE REQUIREMENTS
FOR
TELEDYNE RYAN AERONAUTICAL

CONVAIR LAGOON SAND CAP
SAN DIEGO BAY

COMPREHENSIVE WATER QUALITY CONTROL PLAN, SAN DIEGO REGION

Prohibitions

Selected special considerations are to be applied as discharge regulations over and above constraints established by water quality objectives and effluent limitations. These prohibitions, listed subsequently, are applicable to any person as defined by Section 13050(c) of the California Water Code and to any person who is a citizen, domiciliary, or political agency or entity of California whose activities in California affect the quality of waters in the San Diego Region.

- 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.

- 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.

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

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

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

- Any discharge to a storm water conveyance system that is not composed entirely of "storm water" is prohibited unless authorized by the Regional Board. [The federal regulations, 40 CFR 122.26 (b) (13), define storm water as runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26 (b) (2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities.] [§122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

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

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

- 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.

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

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

- 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.

- The discharge of treated sewage from vessels, which 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 mean lower low water (MLLW) is prohibited.

Water Quality Objectives

The following objectives apply to all inland surface waters and enclosed bays and estuaries of the Region with the exception of ocean waters.

- Ammonia

  The discharge of wastes shall not cause concentrations of un-ionized ammonia (NH_3) to exceed 0.025 mg/l (as N) in inland surface waters, enclosed bays and estuaries and coastal lagoons.

- Bacteria

  In waters designated for contact recreation (REC-1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200/100 ml, nor shall more than 10 percent of total samples during any 30-day period exceed 400/100 ml.

  In waters designated for non-contact recreation (REC-1) and not designated for contact recreation (REC-1), the average fecal coliform concentrations for any 30-day period, shall not exceed 2,000/100 ml nor shall more than 10 percent of samples collected during any 30-day period exceed 4000/100 ml.

In waters where shellfish harvesting for human consumption, commercial or sport purposes is designated (SHELL), the median total coliform concentration throughout the water column for any 30-day period shall not exceed 70/100 ml nor shall more than 10 percent of the samples collected during any 30-day period exceed 230/100 ml for a five-tube decimal dilution test or 330/100 ml when a three-tube decimal dilution test is used.

In bays and estuaries, the most probable number of coliform organisms in the upper 60 feet of the water column shall be less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml).

In San Diego Bay where bay waters are used for whole fish handling, the density of E. coli shall not exceed 7 per ml in more than 20 percent of any 20 daily consecutive samples of bay water.

- Biostimulatory Substances

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

- Color

Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses.

- Dissolved Oxygen

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

- Floating Material

Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations that cause nuisance or adversely affect beneficial uses.

- Hydrogen Ion Concentration

Changes in normal ambient pH levels shall not exceed 0.2 units. In bays and estuaries the pH shall not be depressed below 7.0 nor raised above 8.5.

- Oil and Grease

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

- 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 extend that presents a hazard to humane, plant, animal or aquatic life.

- Sediment

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.

- Suspended and settleable Solids

Waters shall not contain suspended and settleable solids in concentrations that cause nuisance or adversely affect beneficial uses.

- Tastes and Odors

Waters shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

- Temperature

The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses.

At no time or place shall the temperature of any COLD water be increased more than 5°F above the natural receiving water temperature.

- 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, analysis of species diversity, population density, growth anomalies, bioassays of appropriate duration or other appropriate methods as specified by the Regional Board.

- Turbidity

Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

Within San Diego Bay, the transparency of bay waters, insofar as it may be influenced by any controllable factor, either directly or through induced conditions, shall not be less than 8 feet in more than 20 percent of the readings in any zone, as measured by a standard Secchi disk. Wherever the water is less than 10 feet deep, the Secchi disk reading shall not be less than 80 percent of the depth in more than 20 percent of the readings in any zone.