CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ORDER NO. 90-31
NPDES NO. CA0108707
GENERAL
WASTE DISCHARGE REQUIREMENTS
FOR
GROUNDWATER DEWATERING WASTE DISCHARGES
TO
SAN DIEGO BAY OR TRIBUTARIES THERETO
SAN DIEGO COUNTY

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

1. On June 8, 1989 the State Water Resources Control Board (hereinafter State Board), submitted an application to the United States Environmental Protection Agency (hereinafter EPA) requesting revisions to its National Pollutant Discharge Elimination System (NPDES) program in accordance with 40 CFR 123.62 and 403.10. The application included a request to add general permit[1] authority to its approved NPDES program. States may request authority to issue general permits pursuant to 40 CFR 122.28. On September 22, 1989, the EPA, Region IX, approved the State Board's request and granted authorization for the State's issuance of general NPDES permits.

2. 40 CFR 122.28 provides for the issuance of general permits to regulate discharges of waste which result from similar operations, are the same type of waste, require the same effluent limitations, require similar monitoring, and are more appropriately regulated under a general permit rather than individual permits.

3. Existing and proposed discharges of groundwater dewatering waste to San Diego Bay from construction dewatering, foundation dewatering, and groundwater cleanup projects (collectively groundwater dewatering waste discharges): 1) result from similar operations (all involve extraction and discharge of groundwater), 2) are the same type of waste (all are groundwater containing or potentially containing petroleum hydrocarbons[2]), 3) require similar effluent limitations for the protection of the beneficial uses of San Diego Bay, 4) require similar monitoring, and 5) are more appropriately regulated under a general permit rather than individual permits. Therefore, this Order establishes a general permit regulating the discharge of groundwater dewatering waste to San Diego Bay and tributaries thereto.

4. 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 policy established water quality principles, guidelines, effluent quality requirements and prohibitions to govern the disposal of wastes in the enclosed bays and estuaries of California.

5. The discharge of dewatering waste as limited by this Order does not conflict with the Water Quality Control Policy for the Enclosed Bays and Estuaries of California provided that each discharge of groundwater dewatering waste complies with Discharge Specification No. B.1 of this Order and the discharge is limited in duration. However, discharges of dewatering waste could potentially conflict with Chapter I., Item Nos. C. 1 and 2 (Principals for Management of Water Quality in Enclosed Bays and Estuaries) and Discharge Prohibition No. 5 of the Bays and Estuaries Policy if petroleum related compounds or other pollutants are discharged in sufficient concentrations to negatively impact the beneficial uses of San Diego Bay.

6. The State Water Resources Control Board adopted a revised Water Quality Control Plan for Ocean Waters of California (Ocean Plan) on September 22, 1988. The Ocean Plan identifies the following beneficial uses of state ocean waters to be protected:

   a. Industrial water supply;
   b. Navigation;
   c. Aesthetic enjoyment;
   d. Water contact recreation;
   e. Non-contact water recreation;
   f. Ocean commercial and sport fishing;
   g. Mariculture;
   h. Preservation and enhancement of areas of special biological significance;
   i. Preservation and enhancement of rare and endangered species;
   j. Marine habitat;
   k. Fish migration;
   l. Fish spawning; and
   m. Shellfish harvesting.

   In order to protect the above beneficial uses, the Ocean Plan established water quality objectives (for bacteriological, physical, chemical, and biological characteristics, and for radioactivity), general requirements for management of waste discharged to the ocean, quality requirements for waste discharges (effluent quality requirements), discharge prohibitions, and general provisions.

7. Beneficial uses of San Diego Bay are similar to those of the ocean waters of the State. In order to protect the beneficial uses of San Diego Bay, applicable discharge specifications and receiving water quality limitations, derived from the Ocean Plan, have been included in this Order.

8. The Comprehensive Water Quality Control Plan Report, San Diego Basin (9), (Basin Plan) was adopted by this Regional Board on March 17, 1975; approved by the State Water Resources Control Board on March 20, 1975; and updated by the Regional Board on February 27, 1978; March 23, 1981; January 24 and October 3, 1983; August 27, 1984; December 16, 1985; March 25, 1986; and April 25, 1988. The updates were subsequently approved by the State Board.

9. The Basin Plan identifies the following beneficial uses of San Diego Bay waters to be protected:
   a. Industrial service supply;
   b. Navigation;
   c. Water contact recreation;
   d. Non-contact water recreation;
   e. Ocean commercial and sport fishing;
   f. Preservation of rare and endangered species;
   g. Marine habitat;
   h. Fish migration; and
   i. Shellfish harvesting.

10. The Basin Plan contains the following prohibitions, applicable to the discharge, for waters subject to tidal action:

    " The dumping or deposition from shore or from vessels of oil, garbage, trash or other solid municipal, industrial or agricultural waste directly into waters subject to tidal action or adjacent to waters subject to tidal action in any manner which may permit it to be washed into the waters subject to tidal action is prohibited."

    " Discharge of industrial wastewaters exclusive of cooling water, clear brine or other waters which are essentially chemically unchanged, into waters subject to tidal action is prohibited."

    " The dumping or deposition of chemical wastes, chemical agents or explosives into waters subject to tidal action is prohibited."

11. The discharge of groundwater dewatering waste poses the threat of discharging pollutants which may be found in groundwaters surrounding San Diego Bay as a result of decomposition of organic materials (e.g., hydrogen sulfide), leaking underground storage tanks and fuel lines, surface spills, and past use of liquid waste impoundments[2].

12. The assimilative capacity of San Diego Bay for pollutant mass loading is limited. In order to protect the beneficial uses of San Diego Bay waters from excessive mass loading of pollutants as a result of escalating numbers of waste discharges to San Diego Bay, this Order prohibits discharges of groundwater dewatering waste to San Diego Bay from new permanent[3] groundwater dewatering operations. The prohibition of new discharges from permanent groundwater dewatering operations to San Diego Bay will reduce the potential number and duration of discharges to San Diego Bay as intended by the federal Clean Water Act (Section 101(a)(1)) and the <u>Water Quality Control Policy for Enclosed Bays and Estuaries of California</u>. In order to minimize potential impacts of discharges of groundwater containing pollutants on the beneficial uses of San Diego Bay, this Order requires the application of best available technology economically achievable (BAT)[4] for the removal of organic pollutants commonly found in petroleum- and solvent-polluted groundwaters. Discharges in compliance with BAT-based effluent

limitations contained in Discharge Specification No. B.1 of this Order will not have a measurable impact on the beneficial uses of San Diego Bay as a result of the discharge of petroleum related compounds since the effluent limitations for these compounds are equal to the practical quantitation level[5] (such compounds will essentially be nondetectable in discharges of groundwater dewatering waste to San Diego Bay).

13. Any discharge of untreated groundwater to San Diego Bay threatens to cause or contribute to excursions above narrative water quality objectives contained in the Ocean Plan, Bays and Estuaries Plan, and Basin Plan as a result of the potential discharge of petroleum related compounds and metals. On May 26, 1989, the United States Environmental Protection Agency (EPA) enacted revisions to 40 CFR 122. When a proposed discharge of a compound or chemical threatens to cause or contribute to an excursion above a State narrative water quality standard and a numeric water quality standard for the specific chemical has not been established, the NPDES revisions require[6] the Regional Board to 1) establish an effluent limitation using a proposed State water quality objective or standard or an explicit State policy or regulation interpreting its narrative water quality objective which will protect and maintain water quality and designated beneficial uses of the receiving water, 2) establish effluent limitations on a case-by-case basis, using EPA's water quality criteria published under 307(a) of the federal Clean Water Act, or 3) establish effluent limitations on an indicator parameter for the pollutants of concern.

14. Groundwater pollutant plumes are often complex mixtures of hundreds petroleum related compounds (e.g., gasoline contains over 200 chemicals) which makes complete chemical analyses very expensive and sometimes impracticable or impossible due to sample matrix interferences, constituent masking, or the lack of standard analytical techniques. Since water quality criteria for many of the petroleum hydrocarbon compounds have not been proposed or established by the State or EPA, this Order requires monitoring groundwater discharged to San Diego Bay using "indicator constituents" for the detection and evaluation of complex mixtures of petroleum related compounds such as gasoline, diesel fuels, and solvents. The indicator constituents used for evaluating compliance with the narrative water quality criteria in this Order for discharges of gasoline related products are benzene, ethylbenzene, toluene, xylene (collectively BETX), and total petroleum hydrocarbons (TPH) since it is believed that fuels have been adequately studied to justify limiting the analysis to these compounds[7]. This Order establishes effluent limitations and monitoring requirements for BETX and TPH which will ensure that volatile petroleum related compounds will be removed from the waste stream (discussed in the following Finding). This Order also establishes effluent limitations and monitoring requirements for indicator constituents of diesel fuels (TPH - diesel)[8] and solvents commonly found in polluted groundwaters.

15. It has been demonstrated that volatile (e.g., benzene, toluene, ethylbenzene, xylene, etc.) and many other organic pollutants in groundwater can be reduced to less than current analytical detection limits (0.5 to 10 micrograms per liter ($\mu g/L$)) in effluents using available

standard treatment technologies[7,9]. Section 402(a)(1) of the Clean Water Act authorizes the issuance of best available technology (BAT)[4] effluent limitations in NPDES permits using best professional judgement. Thus, best available technology economically achievable for the removal of organic compounds is the basis for effluent limitations for BETX and other volatile hydrocarbons, and base/neutral compounds (volatile hydrocarbons and base/neutral compounds are listed in 40 CFR 136) in Discharge Specification No. B.1 of this Order. Establishing an effluent limitation of 5 µg/L for benzene ensures that other volatile organic compounds of concern will be equally limited as well since benzene is more water soluble and less volatile than the majority of the volatile compounds of concern and has a lower adsorption capacity for granular activated carbon. Therefore, benzene is usually the most difficult compound to remove from a waste stream - the remaining compounds of concern will be sufficiently removed if benzene is removed from the waste stream, whether treatment consists of aeration, adsorption, or a combination of the two processes.

16. In establishing effluent limitations based on BAT, the Regional Board has taken into consideration the following factors:

    a. The appropriate technology for the category or class of which the discharger is a member;

    b. The age of equipment and facilities involved;

    c. The process employed;

    d. The engineering aspects of the application of various types of control techniques;

    e. Process changes;

    f. The cost of achieving such effluent reduction;

    g. Non-water quality environmental impact (including energy requirements); and

    h. Known and potential groundwater contaminants in the vicinity of groundwater dewatering operations covered under this Order.

    The Regional Board recognizes the need to consider any unique factors relating to a discharger or a proposed discharge. In order to consider any unique factors applicable to a particular discharger or discharge, it will be necessary for the discharger to apply for an individual NPDES permit in accordance with Section 13376 of the California Water Code.

17. Discharge specifications contained in this Order for settleable solids, total suspended solids, hydrogen sulfide, and toxicity are based on best professional judgement. Discharge specifications for pH, and total residual chlorine (TRC), metals, polychlorinated biphenyls (PCB), and phenols (chlorinated and nonchlorinated) were obtained from Tables A and B of the Water Quality Control Plan for Ocean Waters of California, 1988. Effluent

limitations for applicable Table B constituents (TRC, metals, PCB, and phenols) are equal to the water quality objectives listed in the Ocean Plan for each constituent since initial dilution is assumed to equal zero. It follows that since groundwater dewatering waste discharged to San Diego Bay must not contain pollutant concentrations in excess of water quality objectives prior to any dilution (mixing with receiving waters), the discharge of groundwater dewatering waste cannot cause excursions above the receiving water quality criteria established in this Order if discharges remain in compliance with effluent limitations.

18. Each discharger's daily maximum discharge flowrate limitation will be contained in the Executive Officer's letter authorizing the initiation of the discharge[10]. Mass emission rate limitations[11] for discharges of specific chemical pollutants will be determined using the authorized discharge flowrate and effluent pollutant concentration limitations specified in Discharge Specification B.1 of this Order.

19. 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"), the Regional Board shall ensure that any increase in pollutant loading to a receiving water meets the requirements stated in the foregoing policies. At a minimum, permitting actions shall be consistent with the following:

    a. Existing instream water uses and the level of water quality necessary to protect existing beneficial uses shall be maintained and protected;

    b. Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, the quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located;

    c. Where high quality waters constitute an outstanding national resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected; and

    d. In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Clean Water Act.

20. The Regional Board, in establishing the requirements contained herein, has taken into consideration the requirements of the State and Federal "antidegradation" policies and has determined that:

a. The conditions and effluent limitations established in this order for discharges of groundwater to San Diego Bay ensure that the existing beneficial uses and quality of San Diego Bay waters will be maintained and protected;

b. Allowing groundwater dewatering waste discharges to San Diego Bay is necessary to accommodate economic development important to the people of the communities surrounding San Diego Bay;

c. San Diego Bay has not been designated an outstanding national resource water; and

d. Thermal discharges potentially impairing water quality are not authorized under the terms and conditions of this Order, thus, Section 316 of the Clean Water Act is not applicable.

21. Discharge criteria established under Sections 301, 302, 304, 306, 307, and 403 of the Clean Water Act (CWA), as amended (33 U.S.C. 1251 et seq.), are applicable to the discharge.

22. Pursuant to Section 402 of the CWA, and amendments thereto, this Order shall serve as a general NPDES permit for the discharge of groundwater dewatering wastes to San Diego Bay for those so authorized[10] by the Executive Officer.

23. 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 the waters under consideration;

e. Environmental characteristics of the 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;

24. The issuance of this general permit for the discharge of groundwater dewatering waste to San Diego Bay 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.

25. The Regional Board has considered all water resource related environmental factors associated with the discharge of groundwater dewatering waste to San Diego Bay.

26. The Regional Board has notified all known interested parties of its intent to issue a general NPDES permit for the discharge of groundwater dewatering waste to San Diego Bay.

27. The Regional Board has, at a public meeting, heard and considered all comments pertaining to the discharge of groundwater to San Diego Bay.

IT IS HEREBY ORDERED, that each authorized discharger[10] (hereinafter discharger), in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act and the regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. The discharge of any radiological, chemical or biological warfare agent, or high level radiological waste to San Diego Bay or tributaries thereto is prohibited.

2. The discharge of wastes to areas designated as being of special biological significance is prohibited. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.

3. The discharge of oil, trash, industrial waste sludge, or other solids directly to San Diego Bay or in any manner which may permit it to be washed into San Diego Bay or tributaries thereto is prohibited.

4. The discharge of groundwater from a specific site in excess of the flowrate specified in each discharger's authorization letter from the Executive Officer is prohibited unless the discharger obtains a revised discharge authorization letter or an individual permit authorizing an increased flowrate.

5. Odors, vectors, and other nuisances of waste origin beyond the limits of each discharger's facility site are prohibited.

6. The addition of pollutants to extracted groundwater, exclusive of chlorine to control biofouling in treatment systems, is prohibited. The addition of chlorine to any portion of the waste stream is prohibited unless dechlorination facilities or other methods ensure compliance with total chlorine residual effluent concentration limits contained in Discharge Specification B.1 of this Order.

7. Excluding discharges of groundwater regulated by a separate NPDES permit, the discharge of groundwater from any site to San Diego Bay,

or tributaries thereto, is prohibited unless the certification report required by Reporting Requirement No. E. 14 for the discharge has been submitted to, and approved by the Executive Officer and the Executive Officer has provided the discharger with written authorization to initiate the discharge.

8. Discharges of waste from new permanent[3] groundwater dewatering operations to San Diego Bay, or tributaries thereto, are prohibited.

9. The discharge of groundwater dewatering waste to San Diego Bay, or tributaries thereto, from a specific groundwater dewatering or remediation project after 1) the expiration date specified in this Order, 2) the completion date of construction of structures requiring construction dewatering, or 3) the date groundwater pollutant concentration(s) have been reduced to the satisfaction of the Executive Officer, whichever date is earliest, is prohibited.

B. DISCHARGE SPECIFICATIONS[12]

1. The discharge of groundwater dewatering waste from any site to San Diego Bay, or tributaries thereto, containing pollutants in excess of the following effluent limitations is prohibited:

Constituent	Unit	6-Month Median[13]	30-day Average[14]	Daily Maximum[15]	Instantaneous Maximum[16]	Basis[17]
Settleable Solids	ml/L	---	0.1	---	0.2	BPJ[18]
Total Suspended Solids	mg/L	---	30	---	50	"
Hydrogen Sulfide	µg/L	---	2	4	10	BPJ[18]
Total Residual Chlorine (TRC)[20]	µg/L	2	---	11	126	OP[19]
pH	Units	Within the limits of 6.0 to 9.0 at all times.				"
Benzene	µg/L	---	---	---	5	BPJ/BAT[21]
Ethylbenzene	µg/L	---	---	---	5	"
Toluene	µg/L	---	---	---	5	"
Xylene	µg/L	---	---	---	5	"
Total Petroleum Hydrocarbons	mg/L	---	---	---	0.5	"
Arsenic	µg/L	8	---	32	80	OP[19]
Cadmium	µg/L	1	---	4	10	"
Chromium (hexavalent)[22]	µg/L	2	---	8	20	"
Copper	µg/L	3	---	12	30	"
Lead	µg/L	2	---	8	20	"
Mercury	µg/L	0.04	---	0.16	0.4	"
Nickel	µg/L	5	---	20	50	"
Silver	µg/L	0.7	---	2.8	7	"
Zinc	µg/L	20	---	80	200	"
Cyanide	µg/L	5	---	20	50	"

Constituent	Unit	6-Month Median[13]	30-day Average[14]	Daily Maximum[15]	Instantaneous Maximum[16]	Basis[17]
Phenolic Compounds (non-chlorinated)	µg/L	30	---	120	300	OP[19]
Chlorinated Phenolics	µg/L	1	---	4	10	"
Polychlorinated Biphenyls	µg/L	0.003	---	0.006	0.009	"
Remaning Volatiles[23]	µg/L	---	---	---	5	BPJ/BAT[21]
Base/Neutral Compounds[23]	µg/L	---	---	---	10	"
Toxicity[24]	Tu	---	---	---	0.59	BPJ[18]

Note: ml/L = milliliters per liter, mg/L = milligrams per liter
µg/L = micrograms per liter, Tu = toxicity units

2. Groundwater discharged to San Diego Bay must be essentially free of:

   a. Material that is floatable or will become floatable upon discharge.

   b. Settleable material or substances that form sediments which degrade[25] benthic communities or other marine life.

   c. Substances which will accumulate to toxic levels in marine sediments or biota.

   d. Substances that significantly[26] decrease the natural light to benthic communities and other marine life.

   e. Materials that result in aesthetically undesirable discoloration of San Diego Bay surface waters.

3. Groundwater discharged to San Diego Bay shall not cause natural water quality conditions to be altered in areas designated as being of special biological significance or areas that existing marine laboratories use as a source of seawater.

4. Groundwater discharged to San Diego Bay shall be discharged in such a manner as to provide maximum protection to marine environments.

C. RECEIVING WATER LIMITATIONS[27]

The discharge of groundwater from any site shall not, separately or jointly with any other discharge, cause violations of the following water quality objectives in San Diego Bay.

1. <u>Physical Characteristics</u>

   a. Floating particulates and grease and oil shall not be visible.

b. The discharge of waste shall not cause aesthetically undesirable discoloration of the surface of San Diego Bay.

c. Natural light shall not be significantly[26] reduced as a result of the discharge of groundwater.

d. The rate of deposition of solids and the characteristics of solids in San Diego Bay sediments shall not be changed such that benthic communities are degraded[25].

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

2. Chemical Characteristics

a. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as a result of the discharge of oxygen demanding waste materials.

b. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

c. The dissolved sulfide concentration of waters in and near sediments and throughout the water column shall not be significantly[26] increased above that present under natural conditions.

d. The concentration of substances set forth in Discharge Specification B.1 in marine sediments shall not be increased to levels which would degrade[25] indigenous biota.

e. The concentration of organic materials in San Diego Bay sediments shall not be increased to levels which would degrade[25] marine life.

f. Nutrient materials shall not cause objectionable aquatic growth or degrade[25] indigenous biota.

3. Biological Characteristics

a. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded[25].

b. The natural taste, odor, and color of fish, shellfish[28], or other aquatic resources used for human consumption shall not be altered.

c. The concentration of organic materials in fish, shellfish or other aquatic resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

4. Radioactivity

Discharge of radioactive waste shall not degrade[25] marine life.

5. Toxic Materials Limitations

Constituent	Unit	6-Month Median	Daily Maximum	Instantaneous Maximum
Total Residual Chlorine (TRC)[20]	µg/L	2	11	126
Benzene	µg/L	—	—	5
Ethylbenzene	µg/L	—	—	5
Toluene	µg/L	—	—	5
Xylene	µg/L	—	—	5
Arsenic	µg/L	8	32	80
Cadmium	µg/L	1	4	10
Chromium (hexavalent)[22]	µg/L	2	8	20
Copper	µg/L	3	12	30
Lead	µg/L	2	8	20
Mercury	µg/L	0.04	0.16	0.4
Nickel	µg/L	5	20	50
Silver	µg/L	0.7	2.8	7
Zinc	µg/L	20	80	200
Cyanide	µg/L	5	20	50
Phenolic Compounds (non-chlorinated)	µg/L	30	120	300
Chlorinated Phenolics	µg/L	1	4	10
Remaining Volatiles[23]	µg/L	—	—	5
Base/Neutral Compounds[23]	µg/L	—	—	10
Toxicity Concentration[24]	tu	0.05	—	0.59

D. PROVISIONS

1. 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.

2. The discharger must comply with all conditions of this Order, Orders which supersede this Order, and the authorization letter from the Executive Officer. Any permit noncompliance constitutes a violation of the Clean Water Act and the California Water Code and is grounds for enforcement action; for permit or authorization letter termination, revocation and reissuance, or modification; the issuance of an individual permit; or for denial of a renewal application.

3. The discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, Orders which supersede this Order, and the authorization letter from the Executive Officer, including such accelerated or additional monitoring as may be necessary to determine

the nature and impact of the noncomplying discharge.

4. This Order, Orders which supersede this Order, or an authorization letter from the Executive Officer, 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, Orders which supersede this Order, or an authorization letter from the Executive Officer.

   b. Obtaining this Order, or an authorization letter from the Executive Officer, by misrepresentation or failure to disclose fully all relevant facts.

   c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; or

   d. A finding that monitoring "indicator" pollutants listed in this Order do not ensure compliance with water quality criteria or objectives for the pollutants expected to be represented by the "indicator" pollutants.

   The filing of a request by the discharger for modification, revocation and reissuance, or termination of this Order or an associated discharge authorization letter from the Executive Officer, or a notification of planned change in or anticipated noncompliance with this Order or discharge authorization letter does not stay any condition of this Order or the authorization letter from the Executive Officer.

5. Notwithstanding Provision 4 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.

6. In addition to any other grounds specified herein, this permit or an authorization letter from the Executive Officer shall be modified or revoked at any time if, on the basis of any new data, the Executive Officer determines that continued discharges may cause unreasonable degradation of the aquatic environment.

7. An authorized discharge, either separately or jointly with any other 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.

8. 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.

9. This Order, Orders which supersede this Order, or an authorization letter from the Executive Officer, is not transferable to any person except after notice to the Executive Officer of this Regional Board. The Regional Board may require the transmittal of a new discharge authorization letter from the Executive Officer 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.3.

10. This Order, Orders which supersede this Order, or an authorization letter from the Executive Officer, 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, including property damage caused as a result of the migration of groundwater contaminant plumes, nor protect the discharger from his liabilities under federal, state, or local laws, nor create a vested right for the discharger to continue his waste discharge.

11. The discharger shall allow the 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.

12. 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, Orders which supersede this Order, or an authorization letter from the Executive Officer. 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 or an authorization letter from the Executive Officer.

13. Bypass of Treatment Facilities

a. Definitions

(1) "Bypass" means the intentional diversion of waste streams from any portion of the treatment facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass Not Exceeding Effluent Limitations

The discharger may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operations. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this section.

c. Notice of Anticipated Bypass and Unanticipated Bypass

(1) Anticipated bypass. If the discharger knows in advance of the need for a bypass, they shall submit prior notice, if possible, at least ten days before the date of the bypass.

(2) Unanticipated bypass. The discharger shall submit notice of an unanticipated bypass as described under Reporting Requirement E.5.

d. Prohibition of Bypass

(1) Bypass is prohibited and the Regional Board may take enforcement action against the discharger for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the discharger could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(c) The discharger submitted notices as required under paragraph (c) of this section.

(2) The Executive Officer may approve an anticipated bypass, after considering its adverse effect, if the Executive Officer determines that it will meet the three conditions listed above in paragraph (a) of this section.

14. Upset Conditions

a. Definitions

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. Effect of an Upset

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph (c) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions Necessary for a Demonstration of Upset

A discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the discharger can identify the specific cause(s) of the upset;

(2) The permitted facility was at the time being properly operated; and

(3) The discharger submitted notice of the upset as required in Reporting Requirement E.5.

d. Burden of Proof

In any enforcement proceeding the discharger seeking to establish the occurrence of an upset has the burden of proof.

15. 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, Orders which supersede this Order, or an authorization letter from the Executive Officer. Upon reduction, loss, or failure of the treatment facility, the discharger shall, to the extent necessary to maintain compliance with this Order, Orders which supersede this Order, or an authorization letter from the Executive Officer, 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.

16. In an enforcement action, it shall not be a defense for the discharger that effluent limitation violations are a result of analytical variability rendering the results inaccurate. The validity of the testing results, whether or not the discharger has monitored or sampled more frequently than required by this Order, shall not be a defense to an enforcement action.

17. A copy of this Order, and the authorization letter from the Executive Officer shall be posted at a prominent location at or near the discharger's facility, and shall be available to operating personnel at all times.

18. The provisions of this Order, Orders which supersede this Order, and the authorization letter from the Executive Officer are severable, and if any provision of this Order or an authorization letter from the Executive Officer, or the application of any provision of this Order or an authorization letter to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this Order and the authorization letter, shall not be affected thereby.

19. The Executive Officer of the Regional Board or Director of the Environmental Protection Agency may require any person authorized to discharge waste by a general permit to apply for and obtain an individual NPDES permit. An interested person may petition the Executive Officer or Director of the Environmental Protection Agency to take action under this provision. Cases where an individual NPDES permit may be required include the following:

a. The discharger is not in compliance with the conditions of this Order or the discharge authorization letter from the Executive Officer;

b. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;

c. Effluent limitation guidelines are promulgated for point sources covered by the general NPDES permit;

d. A Water Quality Management plan containing requirements applicable to such point sources is approved; or

e. The requirements of 40 CFR 122.28(a) are not met.

E. REPORTING REQUIREMENTS

1. 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 the discharger's authorization letter from the Executive Officer.

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.

2. The discharger shall give advance notice to the Executive Officer of any planned changes in the permitted facility or activity which may result in noncompliance with the requirements of this Order, Orders which supersede this Order, or an authorization letter from the Executive Officer.

3. The discharger must notify the Executive Officer, 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 acknowledgement 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.

4. The discharger shall comply with the attached Monitoring and Reporting Program No. 90-31 and any additional monitoring requirements specified by the Executive Officer. Monitoring results shall be reported at the intervals specified in Monitoring and Reporting Program No. 90-31.

5. The discharger shall report any noncompliance which may endanger health or the environment. Any 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 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. The following occurrence(s) must be reported to the Executive Officer within 24 hours:

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

   b. Any unanticipated bypass which causes the effluent limits of this Order to be exceeded.

   c. Violation of a daily maximum effluent limitation as specified in this Order for the following pollutants:

      (1) Hydrogen Sulfide
      (2) Total Chlorine Residual[20]
      (3) Benzene
      (4) Ethylbenzene
      (5) Toluene
      (6) Xylene
      (7) Total Petroleum Hydrocarbons
      (8) Arsenic
      (9) Cadmium
      (10) Chromium (Hexavalent)[22]
      (11) Copper
      (12) Lead
      (13) Mercury
      (14) Nickel
      (15) Silver
      (16) Zinc

(17) Cyanide
(18) Phenolic Compounds (nonchlorinated)
(19) Chlorinated Phenolics
(20) Polychlorinated Biphenyls
(21) Remaining Volatile and Base/Neutral Compounds[23]
(22) Toxicity Concentration[24]

d. Any violation of the prohibitions of this Order or an authorization letter from the Executive Officer.

6. The discharger shall notify the Executive Officer as soon as it is known or there is reason to believe:

a. That any activity has occurred or which will occur which would result in the discharge of any 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 ug/L);

2. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2.4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony.

7. The discharger shall furnish to the Executive Officer, 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 or an authorization letter, or to determine compliance with this Order or other requirements established by the Executive Officer. The discharger shall also furnish to the Executive Officer, upon request, copies of records required to be kept by this Order or an authorization letter from the Executive Officer.

8. The discharger shall provide adequate notice to the Executive Officer 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 provision, adequate notice shall include information on (a) 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 to be discharged to San Diego Bay.

9. Where 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 the Regional Board, they shall promptly submit such facts or information.

10. If a need for a discharge bypass is known in advance, the discharger shall submit prior notice and, if at all possible, such notice shall be submitted at least ten days prior to the date of the bypass.

11. This Order expires on April 23, 1995.

12. All applications, reports, or information submitted to the Executive Officer of this Regional Board shall be signed and certified.

    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 requested 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:

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

        2. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or well field, superintendent, or position of equivalent responsibility (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 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."

13. Except for data determined to be confidential under Title 40, Code of Federal Regulations Part (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 9. As required by the Clean Water Act, Reports of Waste Discharge, this Order, and effluent data shall not be considered confidential.

14. A report certifying the adequacy of each component of the treatment facilities or other type of contingency plan shall be submitted to the Executive Officer by the discharger. This certification report shall contain a requirement-by-requirement analysis, based on accepted engineering practice, of how the process and physical design of the facilities will ensure compliance with this Order. If the report recommends on-site treatment facilities, the report shall also certify that 1) all treatment facility startup and operation instruction manuals are adequate and available to operating personnel, 2) adequate treatment facility maintenance and testing (if treatment facilities are on "standby") schedules are included in the treatment facility operations manual, 3) treatment facilities and appurtenances can be fully operational, as designed, within 24 hours, and 4) influent and effluent sampling locations or ports are located in areas where samples representative of the waste stream to be monitored can be obtained. The design engineer shall affix his/her signature and engineering license number to this certification report.

15. Upon completion of the construction dewatering or groundwater remediation project, the discharger shall cease all discharges of groundwater dewatering waste to San Diego Bay, or tributaries thereto, and submit written notification of the termination of the discharge to the Executive Officer.

16. The discharger shall submit reports required under this Order to:

    Executive Officer
    California Regional Water Quality Control Board
    San Diego Region
    9771 Clairemont Mesa Blvd, Suite B
    San Diego, California 92124-1331

F. NOTIFICATIONS

1. California Water Code Section 13263(g) states:

    "No discharge of waste into the waters of the state, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such

discharge. All discharges of waste into waters of the state are privileges, not rights."

2. The Clean Water Act provides that any person who violates a condition of this Order implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a civil penalty not to exceed $10,000 per day of such violations. Any person who willfully or negligently violates conditions of this Order implementing Section 301, 302, 306, 307 or 308 of the Clean Water Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both.

3. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

4. Nothing in this Order shall be construed to relieve the discharger from civil or criminal penalties for noncompliance.

5. 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 Clean Water Act.

6. 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 Clean Water Act.

7. This Order shall become effective one hundred days after the date of its adoption, provided the Regional Administrator or Director, United States Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.

8. This Order may be revised in accordance with future revisions to the Water Quality Control Policy for Enclosed Bays and Estuaries of California.

I, Arthur L. Coe, Acting 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 April 23, 1990.

ARTHUR L. COE
Acting Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

Footnote references for waste discharge requirements for Order No. 90-31 (NPDES Permit No. CA0108707), General **Waste Discharge Requirements for Groundwater Discharges to San Diego Bay and Tributaries Thereto, San Diego County.**

1. A "general" permit is issued to regulate a number of similar discharges from different facilities or sites within a geographical area.

2. Regional Board files of reported underground storage tank leaks contain data indicating significant numbers of leaking underground tanks which have resulted in petroleum-contaminated groundwaters surrounding San Diego Bay. In addition to petroleum products, the Regional Board's files indicate groundwaters may contain metal concentrations which, if discharged to San Diego Bay, may cause excursions from water quality criteria established in this Order. Hydrogen sulfide is a byproduct of the decomposition of organic matter (particularly proteins) under anaerobic conditions and is found in petroleum products as well. Groundwater dewatering discharges in the Los Angeles area have been shown to contain high concentrations of hydrogen sulfide. Based on best professional judgement, it is assumed that groundwaters surrounding San Diego Bay may also contain high concentrations of hydrogen sulfide. Regional Board files also contain information relating to the use of liquid waste impoundments at Naval Air Station North Island and the San Diego Gas and Electric Company's South Bay Power Plant.

3. "Permanent" groundwater dewatering operations shall refer to dewatering operations for structures which 1) are not designed or constructed to withstand hydrostatic pressure or do not preclude infiltration of groundwater, and 2) require removal of groundwater to prevent water infiltration to the structure(s). For purposes of this Order, "new permanent" groundwater dewatering operations refers to dewatering operations which are initiated after the date of adoption of Order No. 90-31 in cases in which the following conditions apply:

   a. If the project proponent has <u>not</u> submitted a complete Report of Waste Discharge (RWD) to the Regional Board for a proposed discharge of groundwater dewatering waste from a permanent dewatering operation to San Diego Bay, or tributaries thereto, prior to adoption of Order No. 90-31, the discharge is considered a discharge from a new permanent groundwater dewatering operation and is prohibited, unless;

   b. Prior to adoption of Order No. 90-31, the project proponent has applied for the necessary building permits from the proper agencies.

   If the project proponent has not submitted a complete RWD for the proposed dewatering discharge to San Diego Bay from the permanent dewatering operation and has not applied for a building permit from the proper agency prior to adoption of Order No.90-31, the proposed discharge will be considered a discharge from a new permanent dewatering operation and is prohibited under the terms and conditions of Order No. 90-31.

Groundwater dewatering discharges which are not from new permanent groundwater dewatering operations, such as groundwater cleanup and construction dewatering discharges to San Diego Bay, or tributaries thereto, will be authorized under the terms and conditions of this Order. Such discharges shall be terminated after the subterranean structures have been completed or the groundwater has been cleaned up to the satisfaction of the Executive Officer. Discharges of groundwater for the purpose of protecting subterranean structures from groundwater infiltration are not considered groundwater cleanup projects, whether or not such discharges cleanup or remove pollutants from the groundwaters.

4. "Best available technology economically achievable" refers to the best treatment technologies available which have been determined to be cost effective, reliable, and efficient by the Environmental Protection Agency or State or Regional Water Quality Control Board.

5. "Practical Quantitation Level" is defined in 50 FR 46902, November 13, 1985, and refers to the lowest (analytical detection) level achievable by good laboratories within specified limits of precision and accuracy during routine laboratory operating conditions. In general, practical quantitation levels for volatile organic compounds in groundwaters are five to ten times the method detection limit listed in 40 CFR 136.

6. 40 CFR 122.44(d)(1)(vii) requires that if indicator monitoring parameters are used, the following four provisions must be fulfilled: 1) the permit identifies which pollutants are intended to be controlled by use of the indicator effluent limitations, 2) the fact sheet sets forth the basis for each indicator chemical's effluent concentration limitation and includes a finding that compliance with the limit on the indicator constituent will result in controls on the pollutant(s) of concern which are sufficient to attain and maintain water quality standards, 3) effluent and receiving water quality monitoring to show the limit on the indicator parameter attains and maintains applicable water quality standards, and 4) the permit contains a reopener clause. Each of the preceding conditions for inclusion of indicator parameter monitoring has been addressed in this Order, the attached Monitoring and Reporting Program, the discharge authorization letter from the Executive Officer, or the Fact Sheet for this Order.

7. Leaking Underground Storage Tank Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure, State of California, Leaking Underground Fuel Tank Task Force, May 1988.

8. Diesel fuel consists primarily of straight-chain hydrocarbons (alkenes and alkanes) ranging in length from C10 to C23 with C16 and C17 predominating. The C10-C30 straight-chain hydrocarbons can be quantified in groundwater using standard analytical techniques (e.g. California Department of Health Services' recommended analytical procedure for total petroleum hydrocarbons - diesel, (LUFT Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure, October 1989), base/neutral organic analytical techniques contained in 40 CFR 136). Since the predominant components of diesel fuel are the straight-chain hydrocarbons, the total petroleum hydrocarbon - diesel standard testing method contained in the

LUST Manual is used as the indicator of diesel fuel-contaminated groundwaters. Groundwater gasoline remediation projects shall use standard TPH methods.

9. NPDES Permit Limitations for Discharge of Contaminated Groundwater: Guidance Document (Draft), Environmental Protection Agency, Water Management Division, July 1986.

10. After receipt of a written notification of a proposed discharge and receipt of the certification report required by Reporting Requirement E.14 of Order No. 90-31, the Executive Officer may 1) require the project proponent to obtain an individual NPDES permit prior to any discharge to San Diego Bay or tributaries thereto, 2) determine that the proposed discharge is authorized under the terms and conditions of Order No. 90-31, 3) find that the proposed discharge is not authorized under the terms and conditions of Order 90-31, or 4) request additional information necessary to make a determination of the applicability of Order No. 90-31 to the proposed discharge. If the Executive Officer authorizes the discharge, a "discharge authorization letter" will be transmitted to the project proponent (now an "authorized discharger") authorizing the initiation of the discharge subject to the conditions of Order No. 90-31 and any other conditions necessary to protect the beneficial uses of San Diego Bay. The discharge authorization letter from the Executive Officer will also specify the maximum allowed discharge flowrate (which also limits the mass loading rate for each pollutant listed in Discharge Specification No. B 1 of Order No. 90-31) and any additional monitoring and reporting requirements not covered by Monitoring and Reporting Program No. 90-31. If the Executive Officer does not provide written authorization for the initiation of a discharge under the terms and conditions of Order 90-31, the discharge of groundwater dewatering waste to San Diego Bay, or tributaries thereto, is prohibited.

11. The discharge rate in pounds per day is obtained from the following calculation for any calendar day:

$$\text{Discharge rate (lbs/day)} = 8.34 \times Q \times C$$

in which Q and C are the flow rate (MGD) and the constituent concentration (mg/L) respectively. If a composite sample is taken, Q is the average flow rate occurring during the period over which the samples are composited. Mass loading effluent limitations for a specific pollutant may be calculated using the authorized flowrate (in MGD) as the flow rate "Q" and the pollutant concentration limitation contained in Discharge Specification No. B.1 as "C" in the above equation.

12. The effluent limitations for Ocean Plan Table B constituents for dewatering discharges were determined by using an initial dilution factor of zero and applying the calculations and procedures found in the Water Quality Control Plan, Ocean Waters of California, 1988. The effluent limitations for volatile organics (e.g., benzene, ethylbenzene, toluene, and xylene, etc.) are based on best professional judgement of the best available technology economically achievable (BAT) for the removal of volatile organic compounds from water (reference is made to NPDES Permit Limitations for Discharge of

Contaminated Groundwater: Guidance Document (Draft), Environmental Protection Agency, Water Management Division, July 1986) and the practical quantitation level for each compound. Effluent limitations for settleable solids, total suspended solids, toxicity, hydrogen sulfide, and total petroleum hydrocarbons are based on best professional judgement.

Where effluent concentration limitations in this Order are less than Method Detection Limits (MDL) contained in 40 CFR 136, or other analytical detection levels approved by the Executive Officer, compliance with effluent limitations will be assumed if the effluent concentration is less than the MDL or practical quantitation levels contained in the approved analytical method unless more definitive (sensitive) analytical methods are requested by the Executive Officer. If sample matrix interferences, or other interferences result in analytical detection levels less sensitive than those listed in 40 CFR 136, or other methods approved by the Executive Officer, such interferences shall be documented by the laboratory performing the analyses.

13. The 6-month median effluent concentration limit shall apply as a moving median of daily values for any 180-day period in which daily values represent flow-weighted average concentrations within a 24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred.

14. The monthly average shall be the arithmetic mean, using the results of analyses of all samples collected during any 30 consecutive calendar day period.

15. The daily maximum effluent concentration limitation shall apply to flow weighted 24 hour composite sample, or grab samples if the duration of the discharge is less than 24 hours.

16. The instantaneous maximum effluent concentration limit shall apply to grab sample determinations.

17. The "Basis" for each numerical effluent pollutant concentration limit necessary to protect the beneficial uses of San Diego Bay waters was derived or obtained as indicated in the table. Abbreviations listed in the table are explained in the footnote reference nos. 18, 19, and 21 below.

18. "BPJ" = Best Professional Judgement. The application of best professional judgement in establishing effluent limitations is authorized by 40 CFR 125.3. The establishment of BPJ effluent limitations is based on 1) review of effluent limitations for similar operations which discharge wastes to enclosed bays or other receiving waters in the State of California, 2) Compliance with general water quality objectives as required in the Comprehensive Water Quality Control Plan Report, San Diego Basin (9) (Basin Plan), 3) Review of technical support documents Quality Criteria for Water, United States Environmental Protection Agency, if available, for suggested criteria for the protection of aquatic life, 4) the draft document NPDES Permit Limitations for Discharge of Contaminated Groundwater: Guidance Document for volatile organic compounds, 5) Water Quality Control Plan,

Ocean Waters of California, 1988, 6) Water Quality Control Policy for Enclosed Bays and Estuaries of California, and, 7) Leaking Underground Storage Tank Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure, State of California, Leaking Underground Fuel Tank Task Force, May 1988.

19. "OP" = Water Quality Control Plan, Ocean Waters of California, 1988. Effluent limitations for Ocean Plan Table B constituents were determined by using an initial dilution factor of zero and applying the calculations and procedures found in the Water Quality Control Plan, Ocean Waters of California, 1988.

20. Total Residual Chlorine: In samples obtained from marine, saline, or other waters containing bromine, total residual chlorine limitations shall apply to total residual oxidants (TRO). The effluent and receiving water quality limitations for chlorine are based on a continuous discharge. Effluent and receiving water quality limitations for total chlorine residual applying to intermittent chlorine discharges not exceeding two hours, shall be determined through the use of the following equation:

$$\log y = -0.33(\log x) + 2.1$$

where y = the effluent and receiving water quality limitation (in $\mu g/L$) to apply when chlorine is being discharged;
x = the duration of uninterrupted chlorine discharge in minutes.

21. "BPJ/BAT" = The best professional judgement of the best available technology economically achievable. The proposed effluent limitations for volatile and semivolatile organic compounds are based on BPJ/BAT for the removal of organic constituents as authorized by Section 301(b)(2) of the Clean Water Act. The establishment of the BPJ/BAT effluent limitations is based on 1) economically achievable pollutant removal efficiencies of available treatment technologies, 2) analytical detection limits or practical quantitation levels (PQL) established for organic contaminants in waters, 3) the draft document NPDES Permit Limitations for Discharge of Contaminated Groundwater: Guidance Document for volatile petroleum hydrocarbons, prepared by Harold A. Ball and Kenneth H. Sutherland, United States Environmental Protection Agency, Water Management Division, July 1986, 4) Leaking Underground Storage Tank Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure, State of California, Leaking Underground Fuel Tank Task Force, May 1988, 5) Final NPDES General Permit for Petroleum Fuel Contaminated Ground/Storm Waters in the State of Florida, Federal Register, July 17, 1989, and, 6) Model NPDES Permit for Discharges Resulting From the Cleanup of Gasoline Released From Underground Storage Tanks, United States EPA, June 1989.

22. The hexavalent chromium limit may be met as a total chromium limit. If analytical results for total chromium reveal a total chromium concentration greater than the effluent limitations for hexavalent chromium and the sample has not been analyzed for hexavalent chromium, it will be assumed

that hexavalent chromium concentrations are in violation of the effluent limitation.

23. "Remaining volatile and base/neutral organic compounds" are listed in 40 CFR 136. The instantaneous maximum effluent limitation of 10 µg/L for base/neutral compounds does not apply to pesticides.

24. Toxicity concentration: This parameter shall be used to measure the acceptability of waters for supporting a healthy marine, estuarine, or freshwater biota until improved methods are developed to evaluate biological response.

    a. Toxicity Concentration (Tc)

    Expressed in Toxicity Units (tu)

$$Tc\ (tu) = \frac{100}{96\text{-hr.}TLm\%}$$

    b. Median Tolerance Limit (TLm%)

    TLm (percent waste giving 50 percent survival of test organisms) shall determined by static or continuous flow aquatic toxicity 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 environment, but not as a result of dilution, the TLm may be determined after the test samples are adjusted to remove the influences of those substances.

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

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

    S = percentage survival in 100 percent waste,
    if S >99, Tc shall be reported as zero

25. Degradation shall be determined by comparison of the waste field and reference site(s) for characteristics such as species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

26. Significant difference is defined as statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

27. Compliance with the water quality objectives shall be determined from samples collected at stations representative of the area within the waste field where initial dilution is completed. Where the effluent limitations in this Order are based on an initial dilution factor of zero, compliance with the water quality objectives shall be met at all locations in the receiving water.

28. Shellfish are organisms identified by the California Department of Health Services as shellfish for public health purposes (i.e. mussels, clams and oysters).

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

MONITORING AND REPORTING PROGRAM NO. 90-31
FOR
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
GROUNDWATER DEWATERING WASTE DISCHARGES
TO
SAN DIEGO BAY OR TRIBUTARIES THERETO
SAN DIEGO COUNTY

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 points specified in this Order and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Executive Officer.

2. Monitoring must be conducted according to United State Environmental Protection Agency test procedures approved under Title 40, Code of Federal Regulations (CFR), Part 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act" as amended, unless other test procedures have been specified by this Order.

3. 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 the Executive Officer.

4. Monitoring results must be reported on discharge monitoring report forms approved by the Executive Officer.

5. If the discharger monitors any pollutant more frequently than required by this Order, using test procedures approved under 40 CFR, Part 136, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the 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 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.

7. 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 analyses;
e. The analytical techniques or method used; and
f. The results of such analyses.

8. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Executive Officer or in this Order.

9. 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.

10. The discharger shall report all instances of noncompliance not reported under Reporting Requirement No. E.5 of this Order at the time monitoring reports are submitted. The reports shall contain the information listed in Reporting Requirement No. E.5.

11. The monitoring reports shall be signed by an authorized person as required by Reporting Requirement No. E.12.

12. A composite sample is defined as a combination of at least 8 sample aliquots of at least 100 milliliters each, collected at periodic intervals during the operating hours of a facility over a 24-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.

13. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.

14. For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.

B. TREATMENT SYSTEM STATUS

The daily status (e.g., onsite, in operation/on standby, etc.) of any treatment systems used to achieve compliance with Order No. 90-31 or an associated discharge authorization letter from the Executive Officer shall be reported monthly.

C. DISCHARGE FLOWRATE MONITORING

Discharge flowrates shall be recorded and average daily flowrates reported monthly.

D. GROUNDWATER DISCHARGE MONITORING

Discharge monitoring shall be conducted as follows:

Constituent	Units[1]	Sample Type	Minimum Frequency Of Analysis	Reporting Frequency
Settleable Solids	mg/L	grab	Monthly	Monthly
	lb/d	"	"	"
Total Suspended Solids	mg/L	"	"	"
	lb/d	"	"	"
Hydrogen Sulfide	mg/L	"	"	"
	lb/d	"	"	"
Total Residual Chlorine[2]	µg/L	"	Daily if chlorinating	"
	lb/d	"	"	"
pH	Units	"	Monthly	"
Benzene	µg/L	"	"	"
	lb/d	"	"	"
Ethylbenzene	µg/L	"	"	"
	lb/d	"	"	"
Toluene	µg/L	"	"	"
	lb/d	"	"	"
Xylene	µg/L	"	"	"
	lb/d	"	"	"
Remaining Volatiles[3]	µg/L	"	"	"
	lb/d	"	"	"
Total Petroleum Hydrocarbons[4]	mg/L	"	Quarterly	Quarterly
	lb/d	"	"	"
Arsenic	µg/L	"	"	"
	lb/d	"	"	"
Cadmium	µg/L	"	"	"
	lb/d	"	"	"
Chromium[5]	µg/L	"	"	"
	lb/d	"	"	"
Copper	µg/L	"	"	"
	lb/d	"	"	"
Lead	µg/L	"	"	"
	lb/d	"	"	"
Mercury	µg/L	"	"	"
	lb/d	"	"	"
Nickel	µg/L	"	"	"
	lb/d	"	"	"
Silver	µg/L	"	"	"
	lb/d	"	"	"
Zinc	µg/L	"	"	"
	lb/d	"	"	"
Cyanide	µg/L	"	"	"
	lb/d	"	"	"
Phenolic Compounds (non-chlorinated)	µg/L	"	Semiannually	Semiannually
	lb/d	"	"	"
Chlorinated Phenolics	µg/L	"	"	"
	lb/d	"	"	"
Base/Neutrals[3]	lb/d	"	"	"
Toxicity[6]	Tu	"	"	"

E. ANNUAL SUMMARY OF MONITORING DATA

A summary of monitoring data for the past year shall be submitted to the Regional Board prior to January 30 of each year. The report shall contain both tabular and graphical summaries of the previous year's data.

F. REPORTING FREQUENCY

Monitoring reports shall be submitted to the Executive Officer in accordance with the following schedule:

REPORTING FREQUENCY	REPORT PERIOD	REPORT DUE
Monthly	January*, February March, April, May June, July, August September, October November, December	By the 30th day of the following month*.
Quarterly	January - March	April 30
	April - June	July 30
	July - September	October 30
	October - December	January 30
Semiannual	January - June	July 30
	July - December	January 30
Annual	January - December	January 30

Ordered by: _____
Arthur L. Coe
Acting Executive Officer
April 23, 1990

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* Note: The monthly report for January is due no later than February 28.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

Footnote references for Monitoring and Reporting Program No. 90-31, General Waste Discharge Requirements for Groundwater Dewatering Waste Discharges to San Diego Bay or Tributaries Thereto, San Diego County.

1. Units are as follows:

   ml/L = milliliters per liter, mg/L = milligrams per liter
   µg/L = micrograms per liter, lb/d = pounds per day
   MGD = million gallons per day

2. Total Chlorine Residual must be monitored if any portion of the dewatering waste stream is chlorinated.

3. Volatiles and Base/Neutral organic compounds are listed in 40 CFR 136.

4. Groundwater remediation projects involving only diesel fuels and groundwater dewatering operations may use the California Department of Health Services' recommended analytical procedure contained in the Leaking Underground Fuel Tank Field Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure, October 1989 (LUFT Manual) for determining total petroleum hydrocarbons - diesel concentrations in the discharge unless other analytical methods are specified by the Executive Officer. Groundwater remediation projects involving only gasoline may use standard analytical techniques contained in the LUFT Manual for the determination of TPH concentrations in the discharge unless other methods are specified by the Executive Officer.

5. The hexavalent chromium limit may be met as a total chromium limit. If analytical results for total chromium reveal a total chromium concentration greater than the effluent limitations for hexavalent chromium and the sample has not been analyzed for hexavalent chromium, it will be assumed that hexavalent chromium concentrations are in violation of the effluent limitation.

6. Toxicity concentration: This parameter shall be used to measure the acceptability of waters for supporting a healthy marine, estuarine, or freshwater biota until improved methods are developed to evaluate biological response.

   a. Toxicity Concentration (Tc)
      Expressed in Toxicity Units (tu)

      $$Tc\ (tu) = \frac{100}{96\text{-hr.TLm\%}}$$

   b. Median Tolerance Limit (TLm%)

TLm (percent waste giving 50 percent survival of test organisms) shall determined by static or continuous flow aquatic toxicity 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 environment, but not as a result of dilution, the TLm may be determined after the test samples are adjusted to remove the influences of those substances.

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

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

S=percentage survival in 100 percent waste,

if S > 99, Tc shall be reported as zero

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
TECHNICAL CHANGE ORDER NO. T-1
FOR
MONITORING AND REPORTING PROGRAM NO. 90-31
NPDES NO. CA0108707
FOR
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
GROUNDWATER DEWATERING WASTE DISCHARGES
TO
SAN DIEGO BAY OR TRIBUTARIES THERETO
SAN DIEGO COUNTY

This Technical Change Order (TCO) modifies the minimum frequency of analysis and reporting frequency previously established by Monitoring and Reporting Program (MRP) No. 90-31, Provision D., Groundwater Discharge Monitoring. This TCO shall be applicable to short term discharges (short term discharges have a duration of 6 months or less). This TCO shall take effect on January 1, 1994.

GROUNDWATER DISCHARGE MONITORING

Discharge monitoring shall be conducted as follows:

Constituent	Units[1]	Sample Type	Minimum Frequency Of Analysis	Reporting Frequency
Settleable Solids	mg/L	grab	every other week[7]	Monthly
	lb/d	"	"	"
Total Suspended Solids	mg/L	"	"	"
	lb/d	"	"	"
Hydrogen Sulfide	mg/L	"	"	"
	lb/d	"	"	"
Total Residual Chlorine[2]	ug/L	"	Daily if chlorinating	"
	lb/d	"	"	"
pH	Units	"	every other week[7]	"
Benzene	ug/L	"	"	"
	lb/d	"	"	"
Ethylbenzene	ug/L	"	"	"
	lb/d	"	"	"
Toluene	ug/L	"	"	"
	lb/d	"	"	"
Xylene	ug/L	"	"	"
	lb/d	"	"	"
Remaining Volatiles[3]	ug/L	"	"	"
	lb/d	"	"	"
Total Petroleum Hydrocarbons[4]	mg/L	"	every other month[8]	quarterly
	lb/d	"	"	"
Arsenic	ug/L	"	"	"
	lb/d	"	"	"

GROUNDWATER DISCHARGE MONITORING (continued)

Constituent	Units	Sample Type	Minimum Frequency Of Analysis	Reporting Frequency
Cadmium	ug/L	Grab	every other month[8]	quarterly
	lb/d	"	"	"
Chromium[5]	ug/L	"	"	"
	lb/d	"	"	"
Copper	ug/L	"	"	"
	lb/d	"	"	"
Lead	ug/L	"	"	"
	lb/d	"	"	"
Mercury	ug/L	"	"	"
	lb/d	"	"	"
Nickel	ug/L	"	"	"
	lb/d	"	"	"
Silver	ug/L	"	"	"
	lb/d	"	"	"
Zinc	ug/L	"	"	"
	lb/d	"	"	"
Cyanide	ug/L	"	"	"
	lb/d	"	"	"
Phenolic Compounds	ug/L	"	Quarterly	Quarterly
(non-chlorinated)	lb/d	"	"	"
Chlorinated	ug/L	"	"	"
Phenolics	lb/d	"	"	"
Base/Neutrals[3]	lb/d	"	"	"
Toxicity[6]	Tu	"	"	"

Footnote references for TCO No. T-1 to MRP No. 90-31:

7. Analysis shall start the first week of the first month that the discharge begins.
8. Analysis shall start the first month that the discharge begins.

All other previously established provisions in Monitoring and Reporting Program No. 90-31 shall remain unchanged. See pages 5 and 6 of MRP No. 90-31 for footnote reference nos. 1 through 6.

Date: December 17, 1993

ARTHUR L. COE
Executive Officer

tco.wjg