CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ORDER NO. R9-2003-0111

GENERAL WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF TREATED GROUNDWATER FROM VOLATILE ORGANIC COMPOUND CLEANUP SITES TO LAND IN THE SAN DIEGO REGION

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

1. Groundwater cleanup of volatile organic compounds (VOCs) is ongoing at approximately 1,200 sites throughout the San Diego Region. These sites are typically gasoline stations, car dealerships, and petroleum terminals, where fuel is stored in aboveground and underground storage tanks. Other types of VOC cleanups include non-fuel sites that use chlorinated organic compounds in their businesses (for example, dry cleaners, plating shops, and industrial sites).

2. Fuel VOCs principally consist of benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary butyl ether (MTBE), and other fuel oxygenates. Non-fuel VOCs consist of chlorinated organic compounds, principally perchloroethylene (PCE) and tetrachloroethane (TCE).

3. Cleanup of groundwater at many of these sites involves the extraction of polluted groundwater for above ground treatment in a system that removes the VOCs.

4. Disposal options for treated groundwater are becoming limited in the San Diego Region (9) because local wastewater treatment systems lack the capacity to accept treated groundwater. Disposal of treated groundwater to surface water is problematic because, in most cases, the treated groundwater does not meet the effluent limitations for inorganic constituents contained in the Regional Board Order which regulates this type of discharge.

5. Another disposal option for treated groundwater is to discharge it to the subsurface by direct injection through a well, or by rapid percolation or infiltration through the soil. If the treated groundwater is returned to the same aquifer from which it was extracted, there should be no adverse impacts to the receiving water quality or to beneficial uses from the discharge.

6. The extracted groundwater and the receiving groundwater are from the same aquifer if the groundwaters are in direct hydraulic connection, in the same hydrogeologic unit and approximate depth interval, and if the extraction and discharge points are in the same vicinity.

7. Parts of the San Diego Region contain groundwater with ambient background concentrations of chemical constituents that exceed applicable water quality objectives for these constituents. Discharges of treated groundwater from these areas to the same aquifer would exceed water quality objectives but still pose a low threat to water quality and beneficial uses because the treated groundwater would have the same or better water quality than the receiving groundwater. Further, the removal of VOC pollutants in the treatment process would impart a net benefit to groundwater quality at the site.

8. Disposal of treated groundwater by spray irrigation could pose a significant threat to the quality of the receiving groundwater because the uptake of water by plants in the spray field could concentrate chemical constituents in soil that would leach to groundwater in high concentrations during subsequent irrigation cycles. Thus, this Order does not regulate disposal of treated groundwater by spray irrigation.

9. Monitoring the water quality of the extracted groundwater (influent), the treated groundwater (effluent), and the receiving groundwater prior to and during the discharge will provide the data needed to ensure that the receiving groundwater quality is not degraded by the discharge.

10. Disharges of wastes to land for treatment, storage, or disposal are prohibited unless the Regional Board has issued valid Waste Disharge Requirements (WDRs) for that discharge.

11. Discharges of treated groundwater to land are more appropriately regulated under general WDRs than individual WDRs because the discharges are a low threat to water quality and because general WDRs would:

    a) simplify and expedite the process by which these discharges are regulated;
    b) reduce Regional Board time expended on preparing and considering individual WDRs for each project;
    c) provide another disposal option in areas where disposal to a sanitary sewer system is not possible due to lack of capacity;
    d) enhance and protect surface water quality by providing alternatives to the discharge of wastewater to surface waters; and
    e) provide a level of protection comparable to individual, site-specific WDRs.

12. Discharges of extracted groundwater to surface water and discharges to storm water conveyance systems in the San Diego Region are regulated under general NPDES permits adopted by the Regional Board in other orders.

13. The Regional Board may require any discharger regulated under this Order to be regulated under individual WDRs with specific requirements if the discharger has been notified in writing that individual WDRs are required. This notice shall include a brief statement of the reasons for this decision, a Standard Form 200 for filing a Report of Waste Disharge (ROWD), a statement setting a deadline for the

discharger to submit the ROWD, and a statement that on the effective date of the individual requirements the discharge is no longer regulated under this Order.

14. The Regional Board, acting in accordance with section 13240 et. seq. of the California Water Code (CWC), adopted the "Comprehensive Water Quality Control Plan, for the San Diego Basin (Basin Plan) on March 17, 1975. The State Water Resources Control Board (SWRCB) subsequently approved the Basin Plan on December 13, 1994. Subsequent amendments to the Basin Plan have also been adopted by the Regional Board and approved by the SWRCB. The Basin Plan designates the beneficial uses, water quality objectives, and prohibitions, which are incorporated herein. The requirements contained in this Order are consistent with the Basin Plan.

15. Discharges regulated by this Order are classified to be Category IIIB as defined in the Threat to Water Quality and Complexity in the current fee schedule listed in the California Code of Regulations (CCR) Title 23, section 2200.

16. SWRCB Resolution No. 68-16 requires that the Regional Board, in regulating the discharge of waste, maintain high quality waters of the State. The Regional Board must have sufficient grounds to adopt findings which demonstrate that any water quality degradation will:

    a. be consistent with the maximum benefit to the people of the State;
    b. not unreasonably affect existing and potential beneficial uses of such water; and
    c. not result in water quality less than described in the Basin Plan.

    The impact on existing water quality of the discharges regulated by this Order will not be significant and will not unreasonably affect beneficial uses. Therefore, the discharges are consistent with the provisions of Resolution No. 68-16.

17. This Order does not preempt or supercede the authority of municipalities, flood control agencies, or other local or State agencies to prohibit, restrict, or control discharges of waste subject to their jurisdiction.

18. This Order does not preempt, alter, or supersede the authority of Local Oversight Program Agencies to regulate cleanups at underground storage tank sites.

19. Pursuant to CWC section 13304.1, the Regional Board consulted with the California Department of Health Services, public water system operators, and groundwater management agencies within this region concerning the requirements of this Order. The comments of these agencies concerning this Order were considered by the Regional Board in prescribing the general WDRs contained herein.

20. An affected groundwater management entity includes any person who pumps, uses, manages, distributes or has any other interest in the quality of water in a water body affected by discharges of waste regulated under this Order.

21. A public water system is a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year (Health and Safety Code 116275.H). An affected public water system is a public water system that is included in the area of the recharge project.

22. In accordance with the Governor's Executive Order requiring any proposed activity be reviewed to determine whether such activity will cause additional energy usage, this Regional Board has determined that implementation of these general WDRs will not result in a change in energy usage exceeding what would be used if site-specific WDRs were issued for discharges of waste at these sites.

23. On June 11, 2003, the Regional Board certified a Negative Declaration in compliance with the California Environmental Quality Act for the adoption of these general WDRs. The environmental impacts from new discharges regulated by this Order would be less than significant.

24. The Regional Board has notified potential dischargers, interested agencies and persons of the Regional Board's intent to prescribe general WDRs for the discharges regulated by this Order, and has provided those persons with an opportunity to submit their written views and recommendations for the requirements.

25. The Regional Board has considered all written comments received pertaining to this Order.

IT IS HEREBY ORDERED THAT each discharger regulated under these general Waste Discharge Requiements shall meet the provisions contained in Division 7 of the California Water Code and regulations adopted therein and shall comply with the following:

A. ELIGIBILITY

1. Persons proposing to discharge treated groundwater from VOC cleanup sites to land by direct injection through a well, or by rapid percolation or infiltration through soil, or other means that pose a low threat to receiving water quality (hereinafter discharger) shall apply to be regulated under these waste discharge requirements.

2. Prior to seeking regulation under this Order, the discharger shall consult with the affected groundwater management entity, if any, affected public water systems, and the State Department of Health Services concerning the proposed discharge. A written description of, or copies of written comments from these agencies regarding

the proposed discharge shall be submitted to the Regional Board along with a Report of Waste Discharge (ROWD) described in Directive A.5.

3. Water Code section 13304.1 does not pertain to private well owners. However, prior to seeking regulation under this Order, the discharger shall notify private well owners who own a well within 1000 feet of the proposed discharge point. Proof of notification shall be submitted to the Regional Board along with a ROWD described in Directive A.5.

4. In establishing effluent limitations for the discharge, the Regional Board will consider non-VOC chemical constituents in the extracted groundwater (influent) prior to treatment on a constituent by constituent, and discharge by discharge basis provided that the discharger has demonstrated to the satisfaction of the Regional Board that the following conditions are met:

   a. The extracted groundwater is from the same aquifer as the receiving groundwater. The discharger may demonstrate this condition by showing that:

      i. the ambient background non-VOC chemical concentrations in the receiving groundwater, excluding any amount of the constituent in the discharge, is similar in concentration to that of the groundwater extracted for treatment;

      ii. the groundwater at the extraction and discharge points are in direct hydraulic connection, in the same hydrogeologic unit and approximate depth interval, and are reasonably close together, such that the ambient background water quality would be the same at those points; and

      iii. the water quality characteristics are similar in the influent and receiving waters.

      The discharge may also provide any other applicable factors to determine if the extracted groundwater is from the same groundwater aquifer as the receiving groundwater.

   b. The discharger shall not alter non-VOC chemical concentrations in the effluent water in a manner that adversely affects water quality and benficial uses.

   c. The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that, absent the discharge, would not occur.

5. The discharger shall submit a complete ROWD and appropriate filing fee. The ROWD shall include:

   a. A completed Standard Form 200 (Attachment A).

b. A sampling and analysis plan as required by Directive A.4 of Monitoring and Reporting Program No. R9-2003-0111 (Attachment B).

c. A copy of the Interim Remediation Action Plan (IRAP) or Corrective Action Plan (CAP) for the site including any conditions of implementation required by an oversight agency.

d. A copy of the Site Conceptual Model (SCM) for the site.

e. A copy of laboratory data showing the concentrations of chemical constituents in the extracted groundwater and in the receiving groundwater.

f. Certification for appropriate chemical constituent(s) listed in Monitoring and Reporting Program No. R9-2003-0111 that the constituent(s) is/are not present or is/are unlikely to be present in the effluent.

g. A list and description of the proposed groundwater extraction wells, a description and schematic illustration of the disposal system, and a map showing the location of the extraction wells and proposed discharge point(s).

h. A map and cross-section showing the aerial and vertical extent of contaminants at the site.

i. A description of site-specific hydrogeologic characteristics including significant water bearing zones, aquitards, hydraulic conductivity, and infiltration rate for discharge of treated groundwater.

j. Any additional information necessary to demonstrate that the proposed discharge meets the criteria for regulation under this order.

If the information required in Directives 4.e through 4.j is contained in the IRAP, CAP, or SCM, submission of these documents will satisfy the requirements of Directives 4.e through 4.j.

6. The discharger shall receive a notification letter from the Regional Board indicating that either: a) the discharge is appropriately regulated under these general WDRs or b) individual WDRs are required to regulate the discharge.

B. PROHIBITIONS

1. The discharge of treated groundwater shall not cause a violation of the waste discharge prohibitions in the Basin Plan (Attachment C).

2. Discharge of wastes to lands which have not been specifically described in the ROWD and for which valid waste discharge requirements are not in force are prohibited.

3. Discharges of treated or untreated solid or liquid waste to a navigable water or tributary of a navigable water are prohibited unless as authorized by an NPDES permit issued by this Regional Board (9).

C. DISCHARGE SPECIFICATIONS

1. Concentrations of volatile organic compounds (VOCs) in the treated groundwater (effluent) shall be less than or equal to the Practical Quantitation Limits (PQL) for those compounds. The PQL is the lowest concentration that can be consistently determined within plus or minus 20 percent of the true concentration by 75 percent of the laboratories tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL for carcinogens is the Method Detection Limit (MDL) multiplied by five, and for non-carcinogens is the MDL multiplied by 10.

2. The concentrations of the non-VOC chemical constituents in the treatment system effluent (treated groundwater) shall not exceed the concentrations of those non-VOC chemical constituents in the treatment system influent (extracted groundwater) by more than 15 percent (15%) for any sampling event. The annual average concentration of each non-VOC chemical constituent in the effluent shall be less than or equal to the annual average concentration of the same non-VOC chemical constituent in the influent. The annual average concentration shall be the arithmetic mean of the concentrations of a non-VOC chemical constituent in all samples collected in the first 12 months of monitoring, and thereafter, any 12 consecutive month period.

3. The concentrations of the non-VOC chemical constituents in the effluent shall not exceed the concentrations of those non-VOC chemical constituents in the receiving groundwater by more than 15 percent (15%) for any sampling event. The annual average concentration of each non-VOC chemical constituent in the effluent shall be less than or equal to the annual average concentration of the same non-VOC chemical constituent in the receiving groundwater. The annual average concentration shall be the arithmetic mean of the concentrations of a non-VOC chemical constituent in all samples collected in the first 12 months of monitoring, and thereafter, any 12 consecutive month period.

4. The discharge shall not create a condition of pollution or nuisance.

D. PROVISIONS

1. The discharger shall comply with the attached "Standard Provisions Applicable to Waste Discharge Requirements" (Attachment D). If there is any conflict between provisions stated herein and the attached "Standard Provisions," those provisions stated herein shall prevail.

2. Pursuant to the Business and Professions Code, work constituting the professional practice of civil engineering or geology must be performed by or under the direction of a licensed civil engineer or registered geologist respectively.

3. The discharge of waste to or infiltration to a surface water system must be regulated under a separate order as described in Finding 12.

4. This Order does not relieve the discharger of responsibility to obtain other necessary local, State, and federal permits to construct facilities necessary for groundwater extraction, disposal, or treatment in compliance with this Order; nor does this Order preclude imposing additional standards, requirements, or conditions.

5. If the discharger does not own the property at the discharge point, the discharge shall not commence until the property owner has granted permission to the discharger to discharge treated groundwater on the property. Further, the discharge shall not commence until an access agreement between the discharger and the property owner is signed by both parties and submitted to the Regional Board. The agreement must give the discharger adequate access to the property to operate, monitor and maintain the discharge system, and, if necessary, monitor the quality of the receiving groundwater.

6. The discharger shall notify Regional Board by telephone within 24 hours, followed by written notification before the close of business on the seventh day in the event the discharger is unable to comply with any of the conditions of this Order due to discharges of waste resulting from:

   a. failure of waste treatment and discharge equipment;
   b. accident(s) caused by human error or negligence;
   c. other causes such as acts or nature; or
   d. site construction or development operations.

7. A contingency plan shall be developed and kept on site by the discharger. The contingency plan shall detail appropriate action to be taken in order to protect human health and the environment in case of any discharge of waste from failure of the operation of the treatment system.

8. This Order shall remain in effect and shall be applicable to all discharges described herein unless superseded, modified, or terminated by a subsequent order of the

Regional Board. The filing of a request by the discharger for the modification, revocation and reissuance, or termination of regulation under this Order, or notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

E. MONITORING AND REPORTING REQUIREMENTS

1. The discharger shall comply with Monitoring and Reporting Program No. R9-2003-0111 (Attachment B).

2. In the event of failure to submit any relevant facts in a ROWD or submittal of incorrect information in a ROWD or in any report to the Regional Board, the discharger shall promptly submit such facts or information.

3. At any time when the requirements of this Order are not met, the discharger shall submit a written statement of the actions undertaken or proposed that will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.

4. Whenever wastes associated with the discharge under this Order are transported to a different disposal site the following shall be reported in the monitoring report:

   a. type and quantity of wastes;
   b. name and address of the hauler (or method of transport if other than by hauling); and
   c. location of the final point(s) of disposal.

5. All application reports or information to be submitted to the Executive Officer shall be signed and certified as follows:

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

      i. For a corporation: by a principal executive officer or at least the level of vice president.
      ii. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.
      iii. 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:

i. The authorization is made in writing by a person described in paragraph (a) of this provision.
ii. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and
iii. The written authorization is submitted to the Executive Officer.

6. 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." [CWC § 13263, 13267, and 13268] (Standard Provision No. 19).

7. The discharger shall submit reports required under this Order, or other information required by the Regional Board, to:

Executive Officer
California Regional Water Quality Control Board, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340
ATTN: Supervisor, Tank Site Mitigation and Cleanup Unit

F. NOTIFICATIONS

1. No discharge of wastes into 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. These requirements are not issued pursuant to section 402 of the Clean Water Act (33 USC 1342) and have not been officially reviewed by the USEPA.

3. CWC section 13350 provides that any person who intentionally or negligently violates any waste discharge requirements issued, reissued, or amended by this Regional Board is subject to up to $15,000 per day of violation.

4. CWC section 13268 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.

5. This Order becomes effective on the date of adoption by the Regional Board.

I, John H. Robertus, Executive Officer, do hereby certify that 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 June 11, 2003.

JOHN H. ROBERTUS
Executive Officer
Date Signed: June 12, 2003