

California Regional Water Quality Control Board
North Coast Region

ORDER No. R1-2006-0107
(Revised April 12, 2008)

GENERAL WASTE DISCHARGE REQUIREMENTS
FOR

ADDITION OF CHEMICAL OXIDANTS TO SOILS AND/OR GROUNDWATER

The California Regional Water Quality Control Board, North Coast Region (hereinafter the Regional Water Board), finds that:

1. Section 13260(a) of the Water Code requires that all persons discharging waste or proposing to discharge waste that could affect the quality of waters of the state file a report of waste discharge with the Regional Water Board. Under these General Waste Discharge Requirements a Notice of Intent to Comply (NOI) serves as the equivalent of a report of waste discharge.
2. Section 13260(a) also requires that the appropriate filing fee must be submitted along with the report of waste discharge. For the purposes of determining the appropriate filing fee, discharges regulated by these General Waste Discharge Requirements are considered to have a threat to water quality rating of 3, and a complexity rating of A, as defined in section 2200 of the Water Code. The associated fee must accompany the NOI submitted by a discharger seeking coverage under these General Waste Discharge Requirements.
3. The addition of chemical oxidants to the vadose zone and/or groundwater can be an effective treatment technology capable of reducing the levels of contaminants in soil and/or groundwater.
4. The Regional Water Board Water Quality Control Plan for the North Coast Region (Basin Plan) includes water quality objectives and receiving water limitations.
5. Beneficial uses of regional groundwaters include:
 - a. domestic water supply
 - b. agricultural water supply
 - c. industrial service supply
 - d. industrial process supply
6. The action to adopt these General Waste Discharge Requirements is exempt from the provisions of the California Environmental Quality Act (Public Resources Code section 21000, et seq.) (CEQA) because it: (1) authorizes activity that will result in a minor modification to land pursuant to title 14, California Code of Regulations, section 15304; (2) consists of an action by a regulatory agency authorizing actions for the protection of the environment pursuant to title 14, California Code of Regulations, section 15308; and (3) authorizes minor cleanup actions costing \$1

million or less that are taken to prevent, minimize, stabilize, mitigate, or eliminate the release or threat of release of a hazardous waste or substance pursuant to title 14, California Code of Regulations, section 15330. The determination by the Executive Officer that a particular discharge is covered under these General Waste Discharge Requirements is a ministerial decision not subject to CEQA pursuant to title 14, California Code of Regulations, section 15268.

7. The Regional Water Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations.
8. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to these General Waste Discharge Requirements.
9. The permitted discharge is consistent with the antidegradation provision of State Water Resources Control Board Resolution No. 68-16. Any adverse impact on existing water quality is expected to be short-term and insignificant.

THEREFORE, IT IS HEREBY ORDERED that persons filing a Notice of Intent to Comply (hereinafter the discharger) with the provisions of these General Waste Discharge Requirements Order No. R1-2006-0107, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. CONDITIONS OF ELIGIBILITY

1. To obtain coverage under these General Waste Discharge Requirements, a discharger shall submit a complete NOI that describes the proposed action and includes:
 - a. The background water quality of the aquifer into which chemical oxidants will be added, including concentrations of contaminant types, total dissolved solids, chemical oxygen demand, dissolved O₂, dissolved CO₂, metals from **Attachment A** to this Order, and the values of pH, temperature, and oxygen reduction potential.
 - b. The chemical oxidants including specific impurities, the breakdown reactions and products, including specific impurities, for each specific oxidant to be added to the vadose zone and/or groundwater;
 - c. The characterization of the nature of the groundwater plume, hydraulic conductivity, groundwater gradient direction, description of the hydrogeology, complete definition of all preferential pathways and buried

utilities, and description of the nature and volume of any chemical additives;

- d. The description of the engineered remediation and/or treatment system to include: description of oxidant(s) delivery system; injection point and/or well spacing to assure adequate coverage; injection well construction details; oxidant concentrations and rate of injections; description of any needed safety features such as automatic system shutdown when chemical is present in ambient air; provision for operation and maintenance of equipment; description ~~of~~ of chemical storage facilities. The design of the remediation system must be signed and stamped by a California licensed professional engineer or ~~engineering~~ geologist.
 - e. Information on the possibility of any adverse impacts to groundwater quality, and whether the impacts will be localized and short-term, and not adversely affect any current or projected uses of the water during the time that impacts are being realized; and
 - f. Identification of all land uses within 1500 feet. The information will include a map or list sorted by address that identifies the specific use of each structure or vacant parcel along with all wells, utilities, surface water bodies, and other sensitive receptors to include but not limited to locations of schools, hospitals, day care centers, or other areas where the protection of human health and the environment needs to be addressed.
 - g. The discharger shall submit a detailed list of all beneficial uses of groundwater for the specific site.
2. The discharger shall submit a monitoring plan to monitor the effectiveness of the treatment system, protection of human health and the environment, and groundwater quality. Specifically, the monitoring plan shall include a narrative description regarding compliance with Order No. R1-2006-107. At a minimum, the narrative description must include an assessment of the efficiency of the treatment system on reducing the areal extent and concentrations of contaminated soils and/or groundwater. In addition, the narrative description must include any proposed changes to or improve the treatment system. ~~In addition, the narrative description must include an assessment of the efficiency of the treatment system on reduction the areal extent and concentrations of contaminated soil and/or groundwater.~~ The monitoring plan shall describe the locations to be sampled and shall include the following: (1) an up-gradient sampling point; (2) a down-gradient sampling point; and (3) sampling points within the contaminated zone. The monitoring plan shall be designed to collect data for all applicable constituents listed in the table of sampling parameters found in **Attachment A** to this Order.

3. The discharger shall submit a monitoring proposal for each structure that is located above the area of influence from the chemical oxidant treatment area.
4. The discharger shall publish a notice of proposed discharge of chemical oxidant(s), breakdown products, and other constituents of concern in accordance with these General Waste Discharge Requirements in a newspaper of general circulation in the affected area, post a copy of the notice at the site in a prominent location(s), and shall provide notice to contiguous property owners and any interested parties.

B. NOTIFICATION OF COVERAGE

Project coverage under these General Waste Discharge Requirements shall not take effect until the Executive Officer notifies the discharger in writing that coverage has been issued. The Executive Officer shall not issue a notification of project coverage under the General Waste Discharge Requirements prior to the discharger providing notice and a 30-day public comment period on the proposed issuance of coverage. Notification of project coverage under these General Waste Discharge Requirements shall not be issued if the Executive Officer finds that there may be significant impacts to water quality, or finds that significant public controversy has arisen or will likely arise from the issuance of project coverage by these General Waste Discharge Requirements or have adverse impacts to public health and the environment, and that individual Waste Discharge Requirements should be considered at a regularly scheduled Regional Water Board meeting.

C. DISCHARGE PROHIBITIONS

1. The discharge of any remediation chemical other than the chemical(s) identified and concurred with in the "NOI" is prohibited.
2. Creation of a pollution, contamination, or nuisance, as defined by section 13050 of the Water Code, is prohibited.
3. The discharge of chemical oxidants that poses a threat to any sensitive receptor identified in the NOI is prohibited.
4. The discharge of chemical oxidants to land that is not under the control of the discharger is prohibited.
5. The discharge of a chemical oxidants that creates fugitive emissions in excess of federal, state, and/or local air quality standards is prohibited.

6. The discharge of chemical oxidants that creates fugitive air emissions that result in in-door air vapor intrusions threatening human health and the environment is prohibited.
7. The discharge of chemical oxidants that produces groundwater temperatures above 50° C is prohibited.
8. The discharge of chemical oxidants at sites where separate phase product is present is prohibited unless it is demonstrated in the NOI that the discharge does not threaten human health or the environment.

D. PROVISIONS

1. A copy of this Order shall be maintained at the project site and be available at all times to operating personnel.

2. Severability

Provisions of these waste discharge requirements are severable. If any provision of these requirements is found invalid, the remainder of these requirements shall not be affected.

3. Operation and Maintenance

The discharger must maintain in good working order and operate as efficiently as possible any facility or control system installed by the discharger to achieve compliance with the waste discharge requirements.

4. Change in Discharge

The discharger must promptly report to the Regional Water Board any material change in the character, location, or volume of the discharge.

5. Change in Ownership

In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the discharger, the discharger must notify the succeeding owner or operator of the following items by letter, in advance of the transfer of ownership or control, a copy of the notice must be forwarded to the Regional Water Board:

- a. existence of this Order, and
- b. the status of the dischargers' annual fee account.

6. Vested Rights

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the discharger from his liability under federal, State, or local laws, nor create a vested right for the discharger to continue the waste discharge.

7. Monitoring

The discharger must comply with Contingency Planning and Notification Requirements Order No. 74-151 and the Monitoring and Reporting Program developed for the specific discharge as described in CONDITION OF ELIGIBILITY REQUIREMENT A.2 above, and any modifications to these documents as specified by the Executive Officer. Such documents are attached to this Order and incorporated herein. Chemical, bacteriological, and bioassay analyses must be conducted at a laboratory certified for such analyses by the State Department of Health Services.

8. Signatory Requirements

- a. All reports, NOI, or other documents required by these General WDRs, and other information requested by the Regional Board shall be signed by a person described below or by a duly authorized representative of that person.
 - i. for a corporation: by a responsible corporate officer such as: (a) a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function; (b) any other person who performs similar policy or decision making functions for the corporation; or
 - ii. the manager of one or more manufacturing, production, or operating facilities if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- b. Reports required by this Order, other information requested by the Regional Water Board, and NOI's may be signed by a duly authorized representative provided:
 - 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 a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field,

superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; and

iii. the written authorization is submitted to the Regional Water Board prior to or together with any reports, information, or applications signed by the authorized representative.

c. Any person signing a document under paragraph (a) or (b) of this provision shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

9. Inspections

The discharger shall permit authorized staff of the Regional Water Board:

- a. entry upon the project site covered by these General Waste Discharge Requirements or upon any site at which any required records are kept;
- b. access to copy any records required to be kept under terms and conditions of this Order;
- c. inspection of monitoring equipment or records; and
- d. sampling of any discharge.

10. Noncompliance

In the event the discharger is unable to comply with any of the conditions of this Order due to:

- a. breakdown of waste treatment or monitoring equipment;
- b. accidents caused by human error or negligence; or
- c. other causes such as acts of nature;

The discharger must notify the Executive Officer by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written notification shall include pertinent information explaining reasons for the noncompliance and shall indicate

the steps taken to correct the problem and the dates thereof, and the steps being taken to prevent the problem from recurring.

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11. Revision of Requirements

The Regional Water Board may review this Order periodically and may revise requirements when necessary. In addition, the discharger shall file a NOI in compliance with Section A of this Order with the Executive Officer at least 120 days before making any material change or proposed change in the character, location, or volume of the discharge. Coverage for such changes in the discharge will follow the process outlined above in Section B. NOTIFICATION OF COVERAGE.

12. Termination of Coverage

Project coverage under these General Waste Discharge Requirements will automatically terminate two calendar years from the date of the notice of project coverage issued by the Executive Officer unless the discharger requests, in writing, an extension of coverage. The written request for extension of coverage shall clearly describe the reason for the request, and include such other information as deemed appropriate by the Executive Officer. Project coverage may also be terminated by the Executive Officer at any time upon giving reasonable notice to the discharger.

Certification

I, Robert R. Klamt, Interim, 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, North Coast Region, on April 12, 2008

Catherine E. Kuhlman
Executive Officer