

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

**Metropolitan Water District of Southern California (Board Room)
700 North Alameda Street, Los Angeles, California
September 11, 2014
580th Regular Meeting**

**Item No. 8
Consideration of Resolution adopting Mitigated Negative Declaration, and
Waste Discharge Requirements
Order No. R4-2014-XXXX
General Waste Discharge Requirements
for
In-Situ Groundwater Remediation And Groundwater Re-Injection**

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

320 West 4th Street, Suite 200, Los Angeles, California 90013
(213) 576-6660 • Fax (213) 576-6640
<http://www.waterboards.ca.gov/losangeles/>

**ORDER NO. R4-2014-XXXX
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
IN-SITU GROUNDWATER REMEDIATION AND GROUNDWATER RE-INJECTION
(FILE NO. 01-116)**

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The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) finds:

1. On January 24, 2002, pursuant to the Porter-Cologne Water Quality Control Act (Cal. Water Code §§ 13000 et seq.), the Regional Board adopted General Waste Discharge Requirements (General WDRs) (Order No. R4-2002-0030) that regulated discharges of waste associated with groundwater remediation at petroleum hydrocarbon fuel, volatile organic compound, and/or hexavalent chromium impacted sites. Those General WDRs have been revised by Order No. R4-2005-0030 adopted on May 5, 2005, and by Order No. R4-2007-0019 adopted on March 1, 2007. Order No. R4-2007-0019 authorized the use of a variety of materials for in-situ remediation purposes, including oxidation/aerobic degradation enhancement compounds, reducing/reductive degradation enhancement compounds, inorganics/nutrients, carbon sources/electron donors, and tracer study compounds.
2. Since then, additional materials for in-situ remediation have come into use at sites throughout the Los Angeles Region to remediate wastes at petroleum hydrocarbon fuel, volatile organic compound, and inorganic contaminant impacted sites. This revision of the General WDRs by this Order No. R4-2014-XXXX (Order) is to authorize the use of additional materials that have been effectively used to remediate wastes in groundwater and soil.
3. Attachment A of this Order includes a list of materials that can be used for in-situ soil/groundwater remediation purposes. Newly added or revised remedial materials or amendments include chemical oxidants, chemical oxidant activators, aerobic bioremediation enhancement compounds, anaerobic degradation enhancement compounds, reduction degradation enhancement compounds, metals precipitation/stabilization compounds, surfactants/co-solvents, bioaugmentation organisms, tracer study compounds, and buffer solutions and pH adjusters.
4. The California Water Code (CWC), section 13260, subdivision (a)(1) requires that any person discharging wastes, or proposing to discharge wastes other than into a community waste water collection system, which could affect the quality of the waters of the State, shall file a Report of Waste Discharge with the Regional Board. The Regional Board shall then prescribe requirements for the discharge or proposed discharge of wastes.

Revised March 1, 2007
September 11, 2014

5. Section 13263, subdivision (i) of the CWC provides that a Regional Board may prescribe general waste discharge requirements for discharges produced by similar operations, involving similar types of wastes, and requiring similar treatment standards.
6. The dischargers regulated by this Order are more appropriately regulated by general WDRs than individual WDRs because the Regional Board regulates many sites using this type of process, the cleanup of these type of sites is of high priority, the issuance of individual WDRs is time-consuming without providing additional benefit, and the types of treatment used result in similar impacts that can reasonably be regulated with general WDRs. In addition, the adoption of general WDRs for in-situ groundwater remediation/cleanup or the extraction of polluted groundwater with above ground treatment and the return of treated groundwater to the same aquifer zone would: a) simplify the application process for dischargers, b) allow more efficient use of Regional Board staff time, c) minimize the time needed for Regional Board approval of waste discharges by enabling the Executive Officer to notify the discharger of the applicability of the general WDRs, d) enhance the protection of surface water quality by eliminating the discharge of treated groundwater to surface waters, e) preserve water resources by re-injection of treated groundwater into aquifers, and f) provide a level of protection comparable to individual, site-specific WDRs. This Order does not preclude the adoption of individual WDRs where appropriate.
7. Wastes, including petroleum hydrocarbon fuel, volatile organic compounds, and inorganic contaminants, are found in groundwater at various sites throughout the Los Angeles Region and cause or threaten to cause adverse impacts to existing and potential beneficial uses of the region's groundwater resources. Remediation/cleanup of groundwater at these sites includes the use and application of chemical, biological, and physical treatment processes, such as chemical oxidation, chemical oxidant activation, aerobic bioremediation, anaerobic bioremediation, chemical reduction, metals precipitation/stabilization, surfactants/co-solvents, buffering and pH adjustment, or groundwater pump and treat technology with the return of treated groundwater to the same aquifer zone in some cases.
8. The application of such materials or amendments may result in the discharge of waste and may cause unintended adverse impacts to groundwater quality. Any potential adverse water quality impacts that may result will be localized, of short-term duration, and will not impact any existing or prospective beneficial uses of groundwater. Groundwater quality will be monitored before addition of any materials, during treatment, and after treatment is completed to verify no long-term adverse impact to water quality.
9. The implementation of in-situ remediation may require a small-scale pilot testing program or demonstration study prior to the design and implementation of a full-scale remediation project. The discharges from pilot test programs or demonstration studies are also covered under this Order.
10. *The Water Quality Control Plan, for the Los Angeles Region*, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains prohibitions,

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contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board (State Water Board). Pursuant to section 13263(a) of the CWC, waste discharge requirements must implement the Basin Plan.

11. The designated beneficial uses of underlying groundwater include:
 - a. Municipal and domestic water supply (MUN);
 - b. Agricultural water supply (AGR);
 - c. Industrial service supply (IND);
 - d. Industrial process supply (PRO); and
 - e. Groundwater recharge.
12. The Basin Plan establishes numerical and narrative water quality objectives (WQOs) for surface and groundwater within the basin, and recognizes that WQOs are achieved primarily through the Regional Board's adoption of waste discharge requirements and enforcement orders. Where numerical WQOs are listed, these are limits necessary for the reasonable protection of beneficial uses of the water. Where compliance with narrative WQOs is required, the Regional Board will, on a case-by-case basis, adopt numerical limits in orders, which will implement the narrative objectives to protect beneficial uses of the waters of the State. Beneficial uses for individual hydrologic sub-areas are specified in the Basin Plan. See Attachment B (Table 3-13 from the updated 2013 Basin Plan) for WQOs for selected constituents in regional groundwater.
13. State Water Board Resolution No. 92-49 ("Policies and Procedures for Investigation and Cleanup and Abatement of Dischargers Under Water Code Section 13304")(Resolution No. 92-49) requires the Regional Board to require actions for cleanup and abatement of discharges that cause or threaten to cause pollution or nuisance to conform to the provisions of State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California")(Resolution No. 68-16) and the Basin Plan. Pursuant to Resolution No. 92-49, the Regional Board shall ensure that dischargers are required to clean up and abate the effects of discharges in a manner that promotes attainment of either background water quality, or if background levels of water quality cannot be restored, the best water quality which is reasonable and which complies with the Basin Plan including applicable WQOs.
14. Resolution No. 68-16 requires the Regional Board in regulating discharges to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and potential beneficial uses, and will not result in water quality less than that described in plans and policies (e.g., quality that exceeds WQOs). Temporal degradation of groundwater may occur at sites subject to this Order within the defined treatment zone due to the use of amendments. The temporary degradation allowed by this Order is consistent with Resolution No. 68-16 since (1) the purpose is to accelerate and enhance

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- remediation of groundwater pollution and such remediation will benefit the people of the State; (2) the discharge facilitates a project to evaluate the effectiveness of cleanup technology in accord with Resolution No. 92-49; (3) the degradation is limited in scope and duration; (4) best practicable treatment and control, including adequate monitoring and hydraulic control to assure protection of water quality, are required; and (5) the discharge will not cause WQOs to be exceeded beyond the treatment zone and it is expected that increases in concentrations above WQOs caused by the treatment will be reduced over time.
15. The discharges of wastes, including petroleum hydrocarbon fuel, volatile organic compounds, and inorganic contaminants (such as hexavalent chromium), at many sites within the Los Angeles Region affects groundwater sources. Many of the groundwater zones contain general mineral content (total dissolved solids, chloride, sulfate, and boron, etc.) at concentrations that are considered to be naturally occurring and not the result of pollution that may exceed Basin Plan WQOs for these constituents. Treated groundwater that exhibits general mineral content that is naturally occurring and exceeds Basin Plan Objectives may be returned to the same groundwater aquifers from which it is withdrawn, with concentrations not exceeding the original background concentrations for the site. Re-injection of treated groundwater containing materials or amendments authorized by this Order and that may exhibit general mineral content exceeding the original background concentrations may be returned to the same groundwater aquifer within the treatment zone for the purpose of remediating groundwater, if it does not exacerbate the existing groundwater pollution.
 16. Treated groundwater that is discharged to surface waters is prohibited unless subject to a separate National Pollutant Discharge Elimination System (NPDES) Permit.
 17. This Order is applicable to groundwater remediation projects at petroleum hydrocarbon fuel, volatile organic compound, and inorganic contaminant impacted sites. Persons subject to this Order must pay an annual fee based on the threat to water quality and complexity of the discharge. The Executive Officer has determined that this Order is intended to regulate groundwater discharges that have a threat to water quality of Category 3 and Complexity rating of A for a combined rating of 3-A.
 18. Discharges with a rating of 3-A contain wastes that could degrade water quality or cause a minor impairment of designated beneficial uses within the application area of the receiving groundwater. The discharges covered by these requirements are required to comply with a groundwater monitoring program as set forth in this Order.
 19. The requirements contained in this Order were established by considering, and are consistent with, the applicable water quality control plans, policies, and regulations, and compliance with this Order will protect and maintain the existing beneficial uses of the receiving groundwater.
 20. This Order does not relieve dischargers of any regulatory requirements from other governmental agencies.

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21. 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 cleanup at the impacted sites.
22. The Regional Board is the lead agency for this project pursuant to the California Environmental Quality Act (Public Resources Code section 21000 et seq.) and has conducted an Initial Study in accordance with section 15063 of the “State CEQA Guidelines” at California Code of Regulations, title 14, section 15000 et seq. Based upon the Initial Study, the Regional Board prepared a Mitigated Negative Declaration concluding that the project will not have a significant adverse effect on the environment and the Regional Board incorporates Resolution No. R14-XXX adopting the Mitigated Negative Declaration and approving the Environmental Checklist in this Order. The Mitigated Negative Declaration identifies environmental impacts that are less than significant with mitigation measures regarding (1) Air Quality, (2) Geology and Soils, (3) Hydrology and Water Quality, and (4) Transportation and Traffic. The Mitigated Negative Declaration identifies the mitigation measures and the actions to be taken to reduce the impacts to less than significant. The Dischargers are required by this Order to obtain and comply with applicable permits of other agencies. This Order includes a monitoring and reporting program to assure protection of water quality.
23. The discharges authorized in this Order are exempt from the requirements of *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, set forth in the Title 27, California Code of Regulations (CCR), section 20005 et seq. (hereafter Title 27), which allows a conditional exemption from some or all of the provisions of Title 27. The exemption, pursuant to Title 27 CCR Section 20090(b), is based on the following:
 - i. The Regional Water Board is issuing waste discharge requirements.
 - ii. The discharge is in compliance with the applicable Basin Plan.
 - iii. The wastewater does not need to be managed according to Title 22 CCR, Division 4.5 and Chapter 11 as a hazardous waste.

Section 20090(d) allows exemption for a project to clean up a condition of pollution that resulted from an unauthorized discharge of waste based on the following:

- iv. The application of amendments to groundwater is at the direction of the Regional Board to cleanup and abate conditions of pollution or nuisance resulting from the unauthorized discharge of waste;
- v. Wastes removed from the immediate place of release must be discharged according to the Title 27 regulations; and
- vi. The cleanup actions intended to contain wastes at the place of release shall implement the Title 27 regulations to the extent feasible.

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24. Section 13267(b) of the California Water Code provides that:

“In conducting an investigation specified in subdivision (a), the Regional Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish under penalty of perjury, technical or monitoring program reports which the Regional Board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring these reports, the Regional Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”

The technical reports required by this Order and the attached Monitoring and Reporting Program are necessary to assure compliance with this Order. The Discharger operates the facility that discharges the waste subject to this Order.

25. The Regional Board has notified interested agencies and persons of its intent to prescribe General WDRs for the discharges covered under these General WDRs, and has provided them with an opportunity to submit written comments and provide oral testimony at a public hearing.

26. The Regional Board, in a public meeting, heard and considered all comments pertaining to the tentative General WDRs.

IT IS HEREBY ORDERED THAT dischargers authorized under this Order shall meet the provisions contained in Division 7 of the California Water Code, and regulations adopted here under, by complying with the following:

A. ELIGIBILITY

1. A discharger may seek coverage under this Order for:

- a. Existing and future discharges to soil and groundwater of remediation compounds for the purpose of the cleanup of wastes at petroleum hydrocarbon fuel, volatile organic compound, and/or inorganic contaminant impacted sites and similar discharges in pilot studies or full-scale applications.
- b. Re-injection, percolation or infiltration of treated groundwater from a pump and treat remediation system(s). Treated groundwater may be used for

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irrigation and/or dust control provided that the treated groundwater meets the applicable discharge limits for recycling and reuse.

2. To be covered under this Order, a discharge must meet the following criteria:

- a. The Executive Officer must find, based on the Report of Waste Discharge submitted pursuant to Provision C, that the groundwater discharges for which coverage under this Order are sought have a threat to water quality of Category 3 and Complexity rating of A for a combined rating of 3-A, using the rating criteria noted on the Regional Board website.
- b. The discharger must have an approved Remedial Action Plan (RAP). The discharger shall submit a copy of the approved RAP including any conditions of implementation with the Report of Waste Discharge for application of the General WDRs. At a minimum, the RAP shall comply with any requirements of a cleanup and abatement order issued by the Regional Board and include the following site-specific information:
 - The background water quality of the aquifer of the groundwater remediation site(s) including constituents of concern, total dissolved solids, sulfates, chlorides, nitrogen (NH₄, NO₃, NO₂), chemical oxygen demand, biochemical oxygen demand, phosphorus, pH, dissolved metals, nutrients, dissolved oxygen, dissolved carbon dioxide, methane, temperature, iron, and oxidation-reduction potential;
 - Information on any potential adverse impacts to groundwater quality, and whether the impacts will be localized and short-term;
 - The results of any pilot testing performed for the treatment technology used;
 - Site-specific geology (lithology and physical parameters) and hydrogeologic parameters, hydrologic report;
 - Infiltration rate;
 - Characterization and extent of the wastes, including petroleum hydrocarbon fuel, volatile organic compounds, and inorganic contaminants;
 - Description of the treatment system(s);
 - Adequate groundwater monitoring network with historical groundwater monitoring report;
 - Description of the aerial extent of the application area and identification of monitoring wells to be used to determine water quality upgradient, within the application area, downgradient from the application area and identify the compliance point;
 - Material Safety Data Sheet (MSDS) information and other product technical information for any materials to be used for cleanup;

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- Application rate(s), material type(s) and applied concentrations;
 - Evaluation of loading rates for nitrogen compounds, total dissolved solids, sulfate, and chloride compounds; and
 - GeoTracker database update whenever applicable.
- c. This Order authorizes the materials listed in Attachment A to be used for in-situ remediation purposes. The materials listed in Attachment A do not represent all chemicals that might be used in remediation, rather they meet all criteria specified in section 3 below. Any by-product or impurity of any product containing compounds listed in Attachment A is not authorized by this Order and such materials shall not be used for injection under this Order. Compounds listed under one category can also be used under another category.
3. The Executive Officer is delegated the authority to revise and update the list periodically to add materials that meet the following criteria:
- a. Effective to remediate targeted constituents;
 - b. Minimum degradation of water quality (including toxicity and by-product evaluation) that will not cause or contribute to exceedance of WQOs;
 - c. Protective of human health and safety (including prohibition of human/animal pathogens);
 - d. Availability on the market for a minimum of three years.
4. The monitoring program shall be sufficient to identify changes in geochemistry that may alter the potential occurrence of transference of chromium (III) into chromium (VI), or vice versa, during the oxidation or reduction process in the in-situ remediation under these WDRs.
5. For the purpose of replacement of existing individual WDRs with coverage under this Order, renewal is effective upon issuance of a notification of coverage by the Executive Officer and issuance of a new monitoring and reporting program.
6. When individual WDRs with more specific requirements are issued to a discharger, the applicability of this Order to that discharger is automatically terminated on the effective date of the individual WDRs.

B. AUTHORIZATION

To be authorized to discharge under this Order, the discharger must submit a Report of Waste Discharge in accordance with the requirements of Part C of this Order. Upon receipt of the Report of Waste Discharge, the Executive Officer shall determine the completeness of the Report of Waste Discharge and the applicability of this Order to such a discharge. If

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the discharge is eligible, the Executive Officer shall notify the discharger that the discharge is authorized under the terms and conditions of this Order and prescribe an appropriate monitoring and reporting program. For new discharges, the discharge shall not commence until receipt of the Executive Officer's written determination that the discharge is eligible to be covered by this Order and has issued a site-specific monitoring and reporting program.

C. REPORT OF WASTE DISCHARGE

1. Deadline for Submission

- a. New dischargers seeking coverage under this Order shall file a complete Report of Waste Discharge that includes all information identified in Items A.1 and A.2 above at least 90 days before planned commencement of any discharge.
- b. Existing dischargers covered under individual WDRs may seek coverage under this Order by submitting a Report of Waste Discharge that includes all information identified in Items A.1 and A.2. Coverage under this Order will not occur until the discharger receives notification from the Executive Officer.

2. Forms for Report of Waste Discharge

- a. Dischargers shall use the appropriate forms (Standard Form 200) or equivalent forms approved by the State Water Resources Control Board or the Executive Officer of the Los Angeles Regional Board.
- b. The discharger, upon request, shall submit any additional information that the Executive Officer deems necessary to determine whether the discharge meets the criteria for coverage under this Order, and/or in prescribing an appropriate monitoring and reporting program.
- c. The Report of Waste Discharge shall be accompanied by the first annual fee (if appropriate) in accordance with the current version of California Code of Regulation, Title 23, Division 7, Chapter 9, Waste Discharge Report and Requirements Article 1 fees for a discharge. The check or money order shall be made payable to the "State Water Resources Control Board" and submitted to the Regional Water Quality Control Board – Los Angeles Region.

D. DISCHARGE PROHIBITIONS

- 1. The discharge of wastes, amendments, or other materials other than those which meet eligibility requirements in Part A of this Order and listed in Attachment A, is

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prohibited unless the discharger obtains coverage under another general WDR or an individual site-specific WDR that regulates the discharge of such wastes.

2. The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.
3. Creation of a pollution, contamination, or nuisance, as defined by section 13050 of the CWC, is prohibited.
4. The surfacing or overflow of wastes from the treatment system at any time and at any location is prohibited.
5. The disposal of wastes in geologically unstable areas or so as to cause earth movement is prohibited.
6. The discharge of amendments or wastes to surface water or surface water drainage courses is prohibited.
7. The discharge of amendments or wastes to land or groundwater in areas other than that proposed for remediation is prohibited.
8. The discharge of wastes or amendments to property that is not under the control of the Discharger is prohibited. The “area under the control” of the Discharger is defined to be at the borders of the treatment zone at areas owned by the Discharger and/or where the Discharger holds an agreement for purposes of investigation and remediation.
9. The migration of any by-products produced as part of the treatment process beyond the boundaries of the property owned or controlled by the discharger as defined above in Item 8 of Section D or to surface waters is prohibited.

E. DISCHARGE LIMITATIONS

1. The discharge of wastes shall not cause the pH of the receiving groundwater at the compliance point, downgradient outside the application area, to be outside the range of 6.5 and 8.5.
2. The discharge of wastes shall not cause the mineral constituents of the receiving groundwater at the compliance point, downgradient outside the application area, to be in excess of applicable limits given in Attachment B. In the letter of determination, the Executive Officer shall indicate the groundwater limitations in Attachment B applicable to the particular discharge, and identify the compliance point(s) for the site.

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3. The discharge of wastes shall not cause the concentrations of chemical constituents and radionuclides of the receiving groundwater designated for use as domestic or municipal supply at the compliance point, downgradient outside the application area, to be in excess of the Maximum Contaminant Levels (MCLs) specified in the following provisions of Title 22 of the California Code of Regulations which are incorporated by reference into the Basin Plan: Table 64431-A of section 64431 (inorganic chemicals, including fluoride), Table 64444-A of section 64444 (organic chemicals), and Table 64442 of section 64442 and Table 64443 of section 64443 (radioactivity). This incorporation by reference is prospective including future changes to the incorporated provisions as the changes take effect.
4. Treated groundwater recycled and/or reused for irrigation or dust control shall meet the Title 22 Recycle Water Requirement for coliform not to exceed 2.2. most probable numbers per 100 milliliters (MPN/100ml). Wastewater discharged to groundwater basin/subbasin shall meet the Basin Plan objective of 1.1 MPN/100 ml.
5. Waste discharged shall not contain salts, heavy metals, or organic constituents at levels that would cause receiving groundwater at the compliance point, downgradient outside the application area, to exceed the WQOs for groundwater or groundwater that may be in hydraulic connection with surface waters designated for marine aquatic life or body contact recreation.
6. Waste discharged shall not cause the groundwater to contain concentrations of chemical substances or its by-products in amounts that adversely affect any designated beneficial use, outside the application area or treatment zone at the compliance point(s).
7. Waste discharged shall not cause the groundwater to contain residual taste or odor in concentrations that cause nuisance or adversely affect beneficial uses, outside the application area or treatment zone at the compliance point(s).
8. Waste discharged shall not cause the groundwater to contain nitrogen as nitrate-nitrogen plus nitrite-nitrogen ($\text{NO}_3\text{-N} + \text{NO}_2\text{-N}$) that exceeds the background concentrations in groundwater basins, or the Basin Plan's groundwater quality objectives of 45 mg/L as Nitrate (NO_3), or 10 mg/L as nitrate-nitrogen ($\text{NO}_3\text{-N}$), or 1 mg/L as nitrite-nitrogen ($\text{NO}_2\text{-N}$), whichever is lower, outside the application area or treatment zone at the compliance point(s). In a situation where the groundwater may interact with surface water or other aquifers, other relevant regulatory standards may also apply, and then the most protective criteria shall prevail.

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F. PROVISIONS

1. The Executive Officer may require any discharger authorized under this Order to apply for and obtain individual WDRs with specific requirements. The Executive Officer may require in writing that any discharger authorized to discharge under this Order to apply for individual WDRs by submitting a report of waste discharge.
2. This Order incorporates the attached "Standard Provisions Applicable to Waste Discharge Requirements" (Attachment C). If there is any conflict between provisions stated herein before and the attached "Standard Provisions," those provisions stated herein shall prevail.
3. Adequate facilities shall be provided to divert surface and storm water away from the application area and/or treatment system and areas where any wastes are stored.
4. The application of materials or the re-injection or reuse of treated groundwater shall only be at a site owned or controlled as defined above in Item 8 of Section D by the discharger.
5. Re-injection or reuse of treated groundwater shall be limited to the same aquifer where the impacted groundwater was withdrawn from for treatment. Re-injection of treated groundwater to which materials or amendments have been added shall be limited to the same aquifer and within the treatment zone.
6. All technical reports required herein that involve planning, investigation, evaluation, or design or other work requiring interpretation or proper application of engineering or geologic sciences, shall be prepared by, or under the direction of, persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835 and 7835.1. To demonstrate compliance with Title 16, CCR, Sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
7. The discharge of wastes to or infiltration to a surface water of the State and United States must be covered by a separate NPDES permit.
8. The Discharger may be required to submit technical reports pursuant to California Water Code Section 13267 as directed by the Executive Officer. The technical reports required by this Order are necessary to assure compliance with this Order.

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9. This Order does not alleviate the responsibility of the discharger to obtain other applicable local, state, and federal permits to construct facilities necessary for compliance with this Order; nor does this Order prevent imposition of additional standards, requirements, or conditions by any other regulatory agency. Additionally, the discharger shall notify the Native American Heritage Commission of any plans to disturb the soil in order to comply with California Environmental Quality Act (CEQA) guidelines as set forth in Section 15064.5(b)(c). Furthermore the discharger is required to provide local information prior to excavation to the California Historical Resources Information System (CHRIS). This will serve as their due diligence record search to provide proximity to Native American historical and archeological resources. The discharger shall also be required to adhere to California Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98, CEQA Section 15064.5(d) and Section 15064.5 (f) to ensure that mitigation plan provisions are in-place to identify, evaluate and consult with your commission about the discovery and disposition of any recovered human remains or artifacts, should the occasion arise, during the remediation process overseen by this agency.
10. The discharger shall notify Regional Board staff by telephone within 24 hours, followed by written notification within one week, in the event it is unable to comply with any of the conditions of this Order due to:
 - a. Breakdown of waste treatment equipment,
 - b. Accident caused by human error or negligence,
 - c. Other causes such as acts of nature, or
 - d. Site construction or development operations.
11. Any discharger authorized under this Order may request to be excluded from coverage of this Order by applying for individual WDRs.
12. In accordance with section 13263(e) of the California Water Code, these requirements are subject to periodic review and revision by the Regional Board.
13. In accordance with Water Code section 13263(g), these requirements do not create a vested right to continue to discharge and are subject to rescission or modification. All discharges of waste into waters of the state are privileges, not rights.
14. The discharger shall develop a contingency plan and maintain it on site. The contingency plan shall detail appropriate actions to be taken in order to protect human health and the environment in case of any spill or failure related to the operation or mis-operation of the treatment system.

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G. MONITORING AND REPORTING REQUIREMENTS

1. The Executive Officer is hereby authorized to prescribe a Monitoring and Reporting Program for each authorized discharger. This program may include participation of the discharger in a regional monitoring program.
2. The discharger shall file with the Regional Board technical reports on self-monitoring work conducted according to the Monitoring and Reporting Program specified by the Executive Officer and submits other reports as requested by the Regional Board.
3. The discharger shall retain records of all monitoring information and data used to complete the Report of Waste Discharge and application for coverage under this Order for at least five years from the date of permit issuance. The retention period shall be extended during any unresolved litigation regarding the discharge or when requested by the Executive Officer.
4. The discharger shall maintain all sampling, measurement, and analytical results, including the date, exact place, and time of sampling or measurement; individual(s) who did the sampling or measurement; the date(s) analyses were done; analysts' names; and analytical techniques or methods used.
5. All sampling, sample preservation, and analyses must be conducted according to test procedures under title 40 Code of Federal Regulations, section 136, unless other test procedures have been specified in this Order or by the Executive Officer.
6. All chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Environmental Laboratory Accreditation Program (ELAP) or other state agency authorized to undertake such certification.
7. The discharger shall calibrate and maintain all monitoring instruments and equipment to ensure accuracy of measurements, or shall ensure that both activities will be conducted.
8. In reporting the monitoring data, the discharger shall arrange the data in tabular form so that the date, constituents, and concentrations are readily discernible. The data shall be summarized to demonstrate compliance with waste discharge requirements. Laboratory analytical data from any soil testing and/or groundwater monitoring shall be reported in Electronic Deliverable Format in accordance with California Water Code section 13195 et. seq. requirements, if applicable.
9. For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed that will bring the discharge into

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full compliance with requirements at the earliest time and submit a timetable for correction.

10. The discharger shall file a report of any material change or proposed change in the character, location, or volume of the discharge.
11. The discharger shall notify this Regional Board within 24 hours by telephone of any adverse condition resulting from the discharge; such notification shall be affirmed in writing within five working days.
12. 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: type and quantity of wastes; name and address of the hauler (or method of transport if other than by hauling); and location of the final point(s) of disposal.
13. Each monitoring report must contain an affirmation in writing that:

"All analyses were conducted at a laboratory certified for such analyses by and in accordance with current USEPA procedures or as specified in this Monitoring and Reporting Program."

14. Each report shall contain the following completed declaration:

"I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed 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 a fine and imprisonment.

Executed on the _____ day of _____ at _____

_____ (Signature)

_____ (Title)"

15. The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all correspondence and reports required under the WDRs' Monitoring and Reporting Program, including groundwater monitoring

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data and discharge location data (latitude and longitude), correspondence, and pdf monitoring reports to the State Water Resources Control Board GeoTracker database.

H. CONTINUATION OF THIS ORDER

For those dischargers authorized to discharge under this Order, it shall continue in full force and effect until a new order is adopted. This Order will be reviewed periodically.

I. REAUTHORIZATION

Upon re-issuance of a new general permit Order, dischargers authorized under this Order shall file a new Report of Waste Discharge within 45 days of notification by the Executive Officer.

I, Samuel Unger, 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, Los Angeles Region, on September 11, 2014.

Samuel Unger, P.E.
Executive Officer

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Attachment A
List of Authorized Injection Material Amendments

The list below does not represent any endorsement of products or materials by the Regional Water Quality Control Board, Los Angeles Region (Regional Board). Many of the products/materials listed are patented. Users of these products/materials shall comply with any regulations and laws applicable to the use of the products/ materials. Some products/materials may contain by-products or impurities that are not authorized to be used by the Regional Board. Compounds listed under one category can also be used under another category.

Note: Highlighted Items were authorized for use in the 2007 WDR.

1. Chemical Oxidants:

- Fenton's reagent (hydrogen peroxide, ferrous iron catalyst, and pH buffer)
- Hydrogen Peroxide
- Ozone
- Potassium or Sodium Permanganate
- Sodium Percarbonate
- Sodium Persulfate

2. Chemical Oxidant Activators:

- Calcium Hydroxide
- Chelating Agents (ferric ethyldiaminetetraacetic acid (EDTA), sodium citrate, sodium malonate, sodium phytate)
- Silica and Silicates (Silicic Acid, Sodium Silicate, Silica Gel)
- Sodium Hydroxide

3. Aerobic Bioremediation Enhancement Compounds:

- Calcium Oxide/Peroxide
- Calcium Oxy-hydroxide
- Magnesium (Oxide/Hydroxide/Peroxide)
- Methane (Dissolved Phase)
- Propane (Dissolved Phase)

4. Anaerobic Degradation Enhancement Compounds:

- Calcium Sulfate (gypsum)
- Cheese Whey
- Complex organic materials (starch, wood chips, yeast extract, grain milling products)
- Complex Sugars
- Corn Syrup

- Emulsified Vegetable Oil
- Ethanol
- Glucose
- Glycerol esters of fatty acids and poly lactates
- Glycerol Polylactate/Tripolylactate
- Glycerol, Xylitol, Sorbitol
- Guar
- Hematite
- Lactose
- Lecithin
- Magnesium sulfate
- Milk Whey
- Methanol
- Molasses
- Organic Acids (Acetate, Lactate, Propionate, Benzoate, and Oleate)
- Potassium Sulfate
- Propanol
- Sorbitol Cysteinate/Cysteine

5. Reduction Degradation Enhancement Compounds:

- Ferrous Chloride
- Ferrous Gluconate
- Ferrous Sulfate
- Sodium Dithionite
- Zero-Valent Iron

6. Metals Precipitation / Stabilization:

- Calcium Phosphate
- Calcium Polysulfide
- Ferrous Sulfate
- Sodium Tripolyphosphate (STPP)

7. Surfactants/Co-solvents:

- Benzenesulfonic acid
- Dioctyl Sodium Sulfocuccinate
- D-limonene
- Ethoxylated Castor Oils Surfactants
- Ethoxylated Cocamides Surfactants
- Ethoxylated Coco Fatty Acid Surfactants
- Ethoxylated Octylphenolic Surfactants
- Sorbitan Monooleate
- Xanthan Gum

8. Bioaugmentation Organisms: *The users shall prove that any bacterial genomes in the original injection form, its degradation form, other impurity or by-product shall not be human/animal pathogens. Genetically-modified organisms (GMO) should not be used.*

- Dehalococcoides Sp.
- Dehalobacter Sp.
- Geobacter
- Methanomethylovorans
- Desulfovibrio
- Desulfobacterium

9. Tracer Study Compounds: *The tracer compounds shall be highly contrasting and not reactive with current contaminants to be treated. The tracers may be chloride-based, bromide-based, or fluoride-based salts, or similar materials as approved by the Executive Officer.*

- Calcium Bromide
- Calcium Chloride
- Eosin Dyes
- Fluoride Salts
- Iodide
- Potassium Bromide
- Potassium Iodide
- Rhodamine Dyes
- Sodium Bromide
- Sodium Chloride
- Sodium Fluorescein

10. Buffer Solutions and pH Adjusters:

- Calcium Carbonate
- Calcium Magnesium Carbonate
- Potassium Bicarbonate
- Sodium (carbonate/bicarbonate)

Attachment B

Table 3-13. Water Quality Objectives for Selected Constituents in Regional Ground Waters^a.

BASINS			Objectives (mg/l) ^m				
Basin	Basin No ^b	1994 Basin Name	1994 Basin No	TDS	Sulfate	Chloride	Boron
Pitas Point Area^c		Pitas Point Area		None specified			
Upper Ojai Valley	4-1	Ojai Valley	4-1				
Upper Ojai Valley	4-1	Upper Ojai Valley	4-1				
Upper Ojai Valley	4-1	West of Sulfur Mountain Road	4-1	1000	300	200	1.0
Upper Ojai Valley	4-1	Central Area	4-1	700	50	100	1.0
Upper Ojai Valley	4-1	Sisar Area	4-1	700	250	100	0.5
Ojai Valley	4-2	Lower Ojai Valley	4-2				0.5
Ojai Valley	4-2	West of San Antonio-Senior Canyon	4-2	1000	300	200	0.5
Ojai Valley	4-2	East of San Antonio-Senior Canyon	4-2	700	200	50	
Ventura River Valley	4-3	Ventura River Valley	4-3				
Upper Ventura River	4-3.01	Upper Ventura	4-3	800	300	100	0.5
Upper Ventura River	4-3.01	San Antonio Creek Area	4-3	1000	300	100	1.0
Lower Ventura River	4-3.02	Lower Ventura	4-3	1500	500	30	1.5
Santa Clara River Valley^d	4-4	Ventura Central	4-4				
Piru	4-4.06	Santa Clara-Piru Creek Area	4-4				
Piru	4-4.06	Upper Area (above Lake Piru)	4-4	1100	400	200	2.0
Piru	4-4.06	Lower Area East of Piru Creek	4-4	2500	1200	200	1.5
Piru	4-4.06	Lower Area West of Piru Creek	4-4	1200	600	100	1.5
Fillmore	4-4.05	Santa Clara-Sespe Creek Area	4-4				
Fillmore	4-4.05	Topa Topa (upper Sespe) Area	4-4	900	350	30	2.0
Fillmore	4-4.05	Fillmore Area	4-4				
Fillmore	4-4.05	Pole Creek Fan Area	4-4	2000	800	100	1.0
Fillmore	4-4.05	South Side of Santa Clara River	4-4	1500	800	100	1.1
Fillmore	4-4.05	Remaining Fillmore Area	4-4	1000	400	50	0.7
Santa Paula	4-4.04	Santa Clara-Santa Paula Area	4-4				
Santa Paula	4-4.04	East of Peck Road	4-4	1200	600	100	1.0
Santa Paula	4-4.04	West of Peck Road	4-4	2000	800	110	1.0

BASINS			Objectives (mg/l) ^m				
Basin	Basin No ^b	1994 Basin Name	1994 Basin No	TDS	Sulfate	Chloride	Boron
Oxnard	4-4.02	Oxnard Plain	4-4				
Mound	4-4.03	Oxnard Plain	4-4				
Oxnard	4-4.02	Oxnard Forebay	4-4	1200	600	150	1.0
Oxnard	4-4.02	Confined Aquifers	4-4	1200	600	150	1.0
Oxnard	4-4.02	Unconfined & Perched Aquifers	4-4	3000	1000	500	
Pleasant Valley^c	4-6	Pleasant Valley	4-6				
Pleasant Valley	4-6	Confined Aquifers	4-6	700	300	150	1.0
Pleasant Valley	4-6	Unconfined & Perched Aquifers	4-6				
Arroyo Santa Rosa Valley^e	4-7	Arroyo Santa Rosa	4-7	900	300	150	1.0
Las Posas Valley^e	4-8	Las Posas Valley	4-8				
Las Posas Valley	4-8	South Las Posas Area	4-8				
Las Posas Valley	4-8	NW of Grimes Cyn Rd. & LA Ave. & Somis Rd.	4-8	700	300	100	0.5
Las Posas Valley	4-8	E of Grimes Cyn Rd & Hitch Blvd.	4-8	2500	1200	400	3.0
Las Posas Valley	4-8	S of LA Ave Between Somis Rd & Hitch Blvd.	4-8	1500	700	250	1.0
Las Posas Valley	4-8	Grimes Canyon Rd. & Broadway Area	4-8	250	30	30	0.2
Las Posas Valley	4-8	North Las Posas Area	4-8	500	250	150	1.0
Acton Valley^f	4-5	Upper Santa Clara	4-5				
Acton Valley	4-5	Acton Valley	4-5	550	150	100	1.0
Acton Valley	4-5	Sierra Pelona Valley (Agua Dulce)	4-5	600	100	100	0.5
Acton Valley	4-5	Upper Mint Canyon	4-5	700	150	100	0.5
Acton Valley	4-5	Upper Bouquet Canyon	4-5	400	50	30	0.5
Acton Valley	4-5	Green Valley	4-5	400	50	25	
Acton Valley	4-5	Lake Elizabeth-Lake Hughes Area	4-5	500	100	50	0.5
Santa Clara River Valley East	4-4.07	Eastern Santa Clara	4-4.07				

BASINS			Objectives (mg/l) ^m				
Basin	Basin No ^b	1994 Basin Name	1994 Basin No	TDS	Sulfate	Chloride	Boron
Santa Clara River Valley East	4-4.07	Santa Clara-Mint Canyon	4-4.07	800	150	150	1.0
Santa Clara River Valley East	4-4.07	South Fork	4-4.07	700	200	100	0.5
Santa Clara River Valley East	4-4.07	Placentia Canyon	4-4.07	700	150	100	0.5
Santa Clara River Valley East	4-4.07	Santa Clara-Bouquet & San Fransisquito Canyons	4-4.07	700	250	100	1.0
Santa Clara River Valley East	4-4.07	Castaic Valley	4-4.07	1000	350	150	1.0
Santa Clara River Valley East	4-4.07	Saugus Aquifer	4-4.07				
Simi Valley	4-9	Simi Valley	4-9				
Simi Valley	4-9	Simi Valley Basin	4-9				
Simi Valley	4-10	Confined Aquifers	4-9	1200	600	150	1.0
Simi Valley	4-11	Unconfined & Perched Aquifers	4-9				
Simi Valley	4-12	Gillibrand Basin	4-9	900	350	50	1.0
Conejo Valley	4-10	Conejo Valley	4-10	800	250	150	1.0
Coastal Plain of Los Angeles	4-11	Los Angeles Coastal Plain	4-11				
Central	4-11.04	Central Basin	4-11	700	250	150	1.0
West Coast	4-11.03	West Coast Basin	4-11	800	250	250	1.5
Hollywood	4-11.02	Hollywood Basin	4-11	750	100	100	1.0
Santa Monica	4-11.01	Santa Monica Basin	4-11	1000	250	200	0.5
San Fernando Valley	4-12	San Fernando Valley	4-12				
San Fernando Valley	4-12	Sylmar Basin	4-12	600	150	100	0.5
San Fernando Valley	4-12	Verdugo Basin	4-12	600	150	100	0.5
San Fernando Valley	4-12	San Fernando Basin	4-12				
San Fernando Valley	4-12	West of Highway 405	4-12	800	300	100	1.5
San Fernando Valley	4-12	East of Highway 405 (overall)	4-12	700	300	100	1.5
San Fernando Valley	4-12	Sunland-Tujunga Area	4-12	400	50	50	0.5
San Fernando Valley	4-12	Foothill Area	4-12	400	100	50	1.0

BASINS			Objectives (mg/l) ^m				
Basin	Basin No ^b	1994 Basin Name	1994 Basin No	TDS	Sulfate	Chloride	Boron
San Fernando Valley	4-12	Area Encompassing RT- Tujunga -Erwin-N. Hollywood-Whithall- LA/Verdugo-Crystal Springs- Headworks-Glendale/Burbank Well Fields	4-12	600	250	100	1.5
San Fernando Valley	4-12	Narrows Area (below confluence of Verdugo Wash with the LA River	4-12	900	300	150	1.5
San Fernando Valley	4-12	Eagle Rock Basin	4-12	800	150	100	0.5
San Gabriel Valley^g/Raymond^h	4-13	San Gabriel Valley	4-13				
Raymond	4-23	Raymond Basin	4-13				
Raymond	4-23	Monk Hill Sub-Basin	4-13	450	100	100	0.5
Raymond	4-23	Santa Anita Area	4-13	450	100	100	0.5
Raymond	4-23	Pasadena Area	4-13	450	100	100	0.5
San Gabriel Valley	4-13	Main San Gabriel Basin	4-13				
San Gabriel Valley	4-13	Western Area ^g	4-13	450	100	100	0.5
San Gabriel Valley	4-13	Eastern Area ^g	4-13	600	100	100	0.5
San Gabriel Valley	4-13	Puente Basin	4-13	1000	300	150	1.0
Upper Santa Ana Valley/San Gabriel Valley	8-2.01ⁱ	Upper Santa Ana Valley	4-14				
San Gabriel Valley	4-13	Live Oak Area	8-2	450	150	100	0.5
San Gabriel Valley	4-13	Claremont Heights Area	8-2	450	100	50	
San Gabriel Valley	4-13	Pomona Area	8-2	300	100	50	0.5
Upper Santa Ana Valley/ San Gabriel Valley	8-2.01/4-13	Chino Area	8-2	450	20	15	
San Gabriel Valley	4-13	Spadra Area	8-2	550	200	120	1.0
Tierra Rejada	4-15	Tierra Rejada	4-15	700	250	100	0.5
Hidden Valley	4-16	Hidden Valley	4-16	1000	250	250	1.0
Lockwood Valley	4-17	Lockwood Valley	4-17	1000	300	20	2.0
Hungry Valley	4-18	Hungry Valley & Peace Valley	4-18	500	150	50	1.0

BASINS			Objectives (mg/l) ^m				
Basin	Basin No ^b	1994 Basin Name	1994 Basin No	TDS	Sulfate	Chloride	Boron
Conejo Valley	4-10	Thousand Oaks Area	4-19	1400	700	150	1.0
Russell Valley	4-20	Russell Valley	4-20				
Russell Valley	4-20	Russell Valley	4-20	1500	500	250	1.0
Thousand Oaks Area	4-19	Triunfo Canyon Area	4-20	2000	500	500	2.0
Thousand Oaks Area	4-20	Lindero Canyon Area	4-20	2000	500	500	2.0
Thousand Oaks Area	4-21	Las Virgenes Canyon Area	4-20	2000	500	500	2.0
Conejo-Tierra Rejada Volcanic Areaⁱ	No DWR#	Conejo-Tierra Rejada Volcanic Area	4-21				
Malibu Valley	4-22	Santa Monica Mountains-Southern Slopes^k	4-22				
Malibu Valley	No DWR#	Camarillo Area		1000	250	250	1.0
Malibu Valley	No DWR#	Point Dume Area		1000	250	250	1.0
Malibu Valley	4-22	Malibu Valley	4-22	2000	500	500	2.0
Malibu Valley	No DWR#	Topanga Canyon Area		2000	500	500	2.0
San Pedro Channel Islands^l	No DWR#	San Pedro Channel Islands					
Anacapa Island	No DWR#	Anacapa Island	No DWR#				
San Nicholas Island	No DWR#	San Nicholas Island	No DWR#	1100	150	350	
Santa Catalina Island	No DWR#	Santa Catalina Island	No DWR#	1000	100	250	1.0
San Clemente Island	No DWR#	San Clemente Island	No DWR#				
Santa Barbara	No DWR#	Santa Barbara Island	No DWR#				

- a. Objectives for ground waters outside of the major basins listed on this table and outlined in Figure 1-9 have not been specifically listed. However, ground waters outside of the major basins are, in many cases, significant sources of water. Furthermore, ground waters outside of the major basins are either potential or existing sources of water for downgradient basins and, as such, objectives in the downgradient basins shall apply to these areas.
- b. Basins are numbered according to Bulletin 118-Update 2003 (Department of Water Resources, 2003).
- c. Ground waters in the Pitas Point area (between the lower Ventura River and Rincon Point) are not considered to comprise a major basin, and accordingly have not been designated a basin number by the California Department of Water Resources (DWR) or outlined on Figure 1-9.
- d. The Santa Clara River Valley (4-4) was formerly Ventura Central Basin
- e. Pleasant Valley (4-6), Arroyo Santa Rosa Valley (4-7) and Las Posas Valley (4-8) Ground Water Basins were former sub-basins of the Ventura Central Basin (DWR, 1980).
- f. Acton Valley Basin was formerly Upper Santa Clara Basin (DWR, 1980)

- g. San Gabriel Valley is a combination of what were formerly the Western and Eastern areas of the Main San Gabriel Basin, and the Puente Basin. All of the groundwater in the former Main San Gabriel Basin is covered by the objectives listed under Main San Gabriel Basin – Eastern Area and Western Area. Walnut Creek, Big Dalton Wash, and Little Dalton Wash separate the Eastern Area from the Western Area (see the dashed line on Figure A2-17 in Appendix II). Any ground water upgradient of these areas is subject to downgradient beneficial uses and objectives, as explained in Footnote a.
- h. Raymond Basin was formerly a sub-basin of the San Gabriel Valley and is now a separate basin.
- i. The border between Regions 4 and 8 crosses the Upper Santa Ana Valley and San Gabriel Valley Ground Water Basins.
- j. Ground water in the Conejo-Tierra Rejada Volcanic Area occurs primarily in fractured volcanic rocks in the western Santa Monica Mountains and Conejo Mountain areas. These areas have not been delineated on Figure 1-9.
- k. With the exception of ground water in Malibu Valley (DWR Basin No. 4-22), ground waters along the southern slopes of the Santa Monica Mountains are not considered to comprise a major basin and accordingly have not been designated a basin number by the California Department of Water Resources (DWR) or outlined on Figure 1-9.
- l. DWR has not designated basins for ground waters on the San Pedro Channel Islands
- m. The Regional Board may grant, at its sole discretion, individual dischargers a variance from the numeric mineral quality objectives for groundwater specified in Table 3-13 under the conditions and procedures specified in “Coastal Aquifer Variance Provision for Mineral Quality Objectives” set forth in the Regional Objectives for Ground Waters.

STANDARD PROVISIONS
APPLICABLE TO WASTE DISCHARGE REQUIREMENTS

1. DUTY TO COMPLY

The discharger must comply with all conditions of these waste discharge requirements. A responsible party has been designated in the Order for this project, and is legally bound to maintain the monitoring program and permit. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board. [CWC Section 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350]

2. GENERAL PROHIBITION

Neither the treatment nor the discharge of waste shall create a pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code (CWC). [H&SC Section 5411, CWC Section 13263]

3. AVAILABILITY

A copy of these waste discharge requirements shall be maintained at the discharge facility and be available at all times to operating personnel. [CWC Section 13263]

4. CHANGE IN OWNERSHIP

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 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. [CWC Sections 13267 and 13263]

5. CHANGE IN DISCHARGE

In the event of a material change in the character, location, or volume of a discharge, the discharger shall file with this Regional Board a new Report of Waste Discharge. [CWC Section 13260(c)]. A material change includes, but is not limited to, the following:

- (a) Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the Waste.
- (b) Significant change in disposal method, e.g., change from a land disposal to a direct discharge to water, or change in the method of treatment which would significantly alter the characteristics of the waste.

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Standard Provisions Applicable to
Waste Discharge Requirements

- (c) Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area potentially causing different water quality or nuisance problems.
- (d) Increase in flow beyond that specified in the waste discharge requirements.
- (e) Increase in the area or depth to be used for solid waste disposal beyond that specified in the waste discharge requirements. [CCR Title 23 Section 2210]

6. REVISION

These waste discharge requirements are subject to review and revision by the Regional Board. [CCR Section 13263]

7. TERMINATION

Where the discharger becomes aware that it 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, it shall promptly submit such facts or information. [CWC Sections 13260 and 13267]

8. 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, do not protect the discharger from his liability under Federal, State or local laws, nor do they create a vested right for the discharger to continue the waste discharge. [CWC Section 13263(g)]

9. SEVERABILITY

Provisions of these waste discharge requirements are severable. If any provisions of these requirements are found invalid, the remainder of the requirements shall not be affected. [CWC Section 921]

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Standard Provisions Applicable to
Waste Discharge Requirements

10. OPERATION AND MAINTENANCE

The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate 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. [CWC Section 13263(f)]

11. HAZARDOUS RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the State Board or the appropriate Regional Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of Section 13271 of the Water Code unless the discharger is in violation of a prohibition in the applicable Water Quality Control plan. [CWC Section 1327(a)]

12. PETROLEUM RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Article 3.5 (commencing with Section 8574.1) of Chapter 7 of Division 1 of Title 2 of the Government Code. This provision does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Section 311 of the Clean Water Act or the discharge is in violation of a prohibition in the applicable Water Quality Control Plan. [CWC Section 13272]

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Standard Provisions Applicable to
Waste Discharge Requirements

13. ENTRY AND INSPECTION

The discharger shall allow the Regional Board, or an authorized representative 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 operations regulated or required under this Order; and
- (d) Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order, or as otherwise authorized by the California Water Code, any substances or parameters at any location. [CWC Section 13267]

14. MONITORING PROGRAM AND DEVICES

The discharger shall furnish, under penalty of perjury, technical monitoring program reports; such reports shall be submitted in accordance with specifications prepared by the Executive Officer, which specifications are subject to periodic revisions as may be warranted. [CWC Section 13267]

All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices. Annually, the discharger shall submit to the Executive Office a written statement, signed by a registered professional engineer, certifying that all flow measurement devices have been calibrated and will reliably achieve the accuracy required.

Unless otherwise permitted by the Regional Board Executive officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. The Regional Board Executive Officer may allow use of an uncertified laboratory under exceptional circumstances, such as when the closest laboratory to the monitoring location is outside the State boundaries and therefore not subject to certification. All analyses shall be required to be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" [40CFR Part 136] promulgated by the U.S. Environmental Protection Agency. [CCR Title 23, Section 2230]

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Standard Provisions Applicable to
Waste Discharge Requirements

15. TREATMENT FAILURE

In an enforcement action, it shall not be a defense for the discharger that it would have been necessary to halt or to reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the discharger shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced, or is lost. [CWC Section 13263(f)]

16. DISCHARGE TO NAVIGABLE WATERS

Any person discharging or proposing to discharge to navigable waters from a point source (except for discharge of dredged or fill material subject to Section 404 of the Clean Water Act and discharge subject to a general NPDES permit) must file an NPDES permit application with the Regional Board. [CCR Title 2 Section 22357]

17. ENDANGERMENT TO HEALTH AND ENVIRONMENT

The discharger shall report any noncompliance which may endanger health or the environment. Any such information shall be provided verbally to the Executive Officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The following occurrence(s) must be reported to the Executive Office within 24 hours:

- (a) Any bypass from any portion of the treatment facility.
- (b) Any discharge of treated or untreated wastewater resulting from sewer line breaks, obstruction, surcharge or any other circumstances.
- (c) Any treatment plant upset which causes the effluent limitation of this Order to be exceeded. [CWC Sections 13263 and 13267]

18. MAINTENANCE OF RECORDS

The discharger shall retain records of all monitoring information including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies off all reports required by this Order, and record of all data used

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Standard Provisions Applicable to
Waste Discharge Requirements

to complete the application for this Order. Records shall be maintained for a minimum of three 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.

Records of monitoring information shall include:

- (a) The date, exact place, and time of sampling or measurement;
 - (b) The individual(s) who performed the sampling or measurement;
 - (c) The date(s) analyses were performed;
 - (d) The individual(s) who performed the analyses;
 - (e) The analytical techniques or method used; and
 - (f) The results of such analyses.
19. (a) All application reports or information to be submitted to the Executive Office shall be signed and certified as follows:
- (1) For a corporation – by a principal executive officer or 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) A duly authorized representative of a person designated in paragraph (a) of this provision may sign documents if:
- (1) The authorization is made in writing by a person described in paragraph (a) of this provision.
 - (2) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and
 - (3) The written authorization is submitted to the Executive Officer.

Any person signing a document under this Section shall make the following certification:

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Standard Provisions Applicable to
Waste Discharge Requirements

“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 Sections 13263, 13267, and 13268]”

20. OPERATOR CERTIFICATION

Supervisors and operators of municipal wastewater treatment plants and privately owned facilities regulated by the PUC, used in the treatment or reclamation of sewage and industrial waste shall possess a certificate of appropriate grade in accordance with Title 23, California Code of Regulations Section 3680. State Boards may accept experience in lieu of qualification training. In lieu of a properly certified wastewater treatment plant operator, the State Board may approve use of a water treatment plant operator of appropriate grade certified by the State Department of Health Services where reclamation is involved.

Each plant shall be operated and maintained in accordance with the operation and maintenance manual prepared by the municipality through the Clean Water Grant Program [CWC Title 23, Section 2233(d)]

ADDITIONAL PROVISIONS APPLICABLE TO
PUBLICLY OWNED TREATMENT WORKS' ADEQUATE CAPACITY

21. Whenever a publicly owned wastewater treatment plant will reach capacity within four years the discharger shall notify the Regional Board. A copy of such notification shall be sent to appropriate local elected officials, local permitting agencies and the press. The discharger must demonstrate that adequate steps are being taken to address the capacity problem. The discharger shall submit a technical report to the Regional Board showing flow volumes will be prevented from exceeding capacity, or how capacity will be increased, within 120 days after providing notification to the Regional Board, or within 120 days after receipt of notification from the Regional Board, of a finding that the treatment plant will reach capacity within four years. The time for filing the required technical report may be extended by the Regional Board. An extension of 30 days may be granted by the Executive Officer, and longer extensions may be granted by the Regional Board itself. [CCR Title 23, Section 2232]

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

320 West 4th Street, Suite 200, Los Angeles, California 90013
(213) 576-6660 • Fax (213) 576-6640
<http://www.waterboards.ca.gov/losangeles/>

RESOLUTION NO. R14-XXX

**APPROVING THE ENVIRONMENTAL CHECKLIST AND
ADOPTING A MITIGATED NEGATIVE DECLARATION FOR
GENERAL WASTE DISCHARGE REQUIREMENTS FOR IN-SITU GROUNDWATER
REMEDICATION AND GROUNDWATER RE-INJECTION
(FILE NO. 01-116)**

WHEREAS, THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION, FINDS:

1. The California Water Code (CWC) section 13260, subdivision (a)(1) requires that any person discharging wastes or proposing to discharge wastes, other than into a community waste water collection system, which could affect the quality of the waters of the State, shall file a Report of Waste Discharge with the California Regional Water Quality Control Board, Los Angeles Region (Regional Board). The Regional Board shall then prescribe requirements for the discharge or proposed discharge of wastes.
2. Section 13263, subdivision (i), of the CWC provides that a Regional Board may prescribe general Waste Discharge Requirements (WDRs) for discharges produced by similar operations, involving similar types of wastes, and requiring similar treatment standards.
3. Wastes, including petroleum hydrocarbon fuel, volatile organic compounds and inorganic contaminants, have impacted groundwater at various sites throughout the Los Angeles Region and cause or threaten to cause adverse impacts to existing and potential beneficial uses of the region's groundwater resources. Remediation/cleanup of groundwater at these sites includes the use and application of chemical, biological, and physical treatment processes, such as oxygen enhanced process, chemical oxidation, chemical reduction, nutrient or chemical addition for enhanced biodegradation, or groundwater pump and treat technology with the return of treated groundwater to the same aquifer zone in some cases.
4. Pursuant to the section 13263 of the CWC, the Regional Board adopted General Waste Discharge Requirements Order No. R4-2002-0030 (General WDRs) on January 24, 2002, that regulated discharges of waste associated with groundwater remediation at petroleum hydrocarbon fuel, volatile organic compound and/or hexavalent chromium impacted sites. Those General WDRs have been revised by Order No. R4-2005-0030 adopted on May 5, 2005, and by Order No. R4-2007-0019, adopted on March 1, 2007. Order No. R4-2007-0019 authorized the use of a variety of materials for in-situ remediation purposes, including oxidation/aerobic degradation enhancement

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- compounds, reducing/reductive degradation enhancement compounds, inorganics/nutrients, carbon sources/electron donors, and study tracer compounds.
5. Since then, additional materials for in-situ remediation have come into use at sites throughout the Los Angeles Region and elsewhere to address wastes at petroleum hydrocarbon fuel, volatile organic compound, and inorganic contaminant impacted sites. Order No. R4-2014-XXXX revises the existing General WDRs to accommodate the new materials that have been effectively used to remediate wastes in groundwater and soil.
 6. Attachment A of Order R4-2014-XXXX includes a list of materials that can be used for in-situ remediation purposes. Newly added or revised remedial materials or amendments include chemical oxidants, chemical oxidant activators, aerobic bioremediation enhancement compounds, anaerobic degradation enhancement compounds, reduction degradation enhancement compounds, metals precipitation/stabilization compounds, surfactants/co-solvents, bioaugmentation organisms, tracer study compounds, buffer solutions and pH adjusters.
 7. The Regional Board is the lead agency for the project – the adoption of revised General WDRs - pursuant to the California Environmental Quality Act (CEQA) and has conducted an Initial Study (in the format of an expanded Environmental Checklist) in accordance with Title 14, California Code of Regulations, Section 15063, entitled Guidelines for Implementation of the California Environmental Quality Act. Based on the Initial Study, the Regional Board prepared a Mitigated Negative Declaration that concludes that the project will not have a significant adverse effect on the environment.
 8. The Mitigated Negative Declaration identifies potentially significant environmental impacts regarding (1) Air Quality, (2) Geology and Soils, (3) Greenhouse Gas Emissions, (4) Hazards and Hazardous Materials, (5) Hydrology and Water Quality, (6) Noise, (7) Population and Housing, and (8) Transportation and Traffic. The Mitigated Negative Declaration identifies the mitigation measures and the actions to be taken to reduce the impacts to less than significant. The dischargers subject to the General WDRs are required to comply with the conditions of the WDRs and are required by the General WDRs to obtain and comply with applicable permits of other agencies. This Order includes a monitoring and reporting program to assure protection of water quality and compliance with mitigation measures.
 9. Copies of the Environmental Checklist and proposed Mitigated Negative Declaration were transmitted to all agencies and persons known to be interested in the matter and they were provided an opportunity to comment.
 10. The application of any materials to groundwater is intended to improve water quality, but also may result in unintended adverse impacts to groundwater quality. Any potential adverse water quality impacts that may result will be localized, of short-term duration, and will not impact any existing or prospective uses of groundwater. Groundwater quality will be monitored before addition of any materials, during treatment, and after treatment is completed to verify no long-term adverse impact to water quality.

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11. *The Water Quality Control Plan, for the Los Angeles Region*, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains prohibitions, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board (State Board). Beneficial uses of groundwater in the Los Angeles Region include, among others: municipal and domestic supply, industrial service and process supply, agricultural supply and groundwater recharge. Beneficial uses for individual Hydrologic Sub-areas are specified in the Basin Plan. Pursuant to section 13263(a) of the California Water Code (CWC), waste discharge requirements must implement the Basin Plan.
12. The General WDRs are applicable to groundwater remediation at petroleum hydrocarbon fuel, volatile organic compound, and inorganic constituent impacted sites in the Los Angeles Region. The discharges authorized by the General WDRs are required to comply with a groundwater monitoring program as set forth in the Monitoring and Reporting Programs required by the General WDRs.
13. The requirements contained in the General WDRs are consistent with applicable water quality control plans, policies, and regulations and will protect and maintain the beneficial uses of the receiving groundwater.
14. The permitted discharge is consistent with State Water Resources Control Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California", also called the "anti-degradation policy"). The General WDRs authorize the use of materials to effectively clean up wastes and contain conditions to protect waters of the State from degradation.
15. The Regional Board considered all testimony and evidence at a public hearing held on September 11, 2014, at the Metropolitan Water District of Southern California located at 700 North Alameda Street, Los Angeles, California and good cause was found to approve the Environmental Checklist and adopt a Mitigated Negative Declaration.

THEREFORE BE IT RESOLVED THAT:

1. This Regional Board hereby approves the Environmental Checklist and adopts the Mitigated Negative Declaration for the General Waste Discharge Requirements for In-Situ Groundwater Remediation and Groundwater Re-injection.
2. The application of chemical, biological and physical treatment processes, such as oxygen enhanced process, chemical oxidation, nutrient or chemical addition for enhanced biodegradation or groundwater pump and treat discharges shall conform with all the requirements, conditions, provisions and limitations set forth in the Order No. R4-2014-XXXX.

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CERTIFICATION

I, Samuel Unger, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Los Angeles Region on September 11, 2014.

Samuel Unger, P.E.
Executive Officer

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Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
 For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2014061103

Project Title: General Waste Discharge Requirements for In-Situ Groundwater Remediation and Groundwater Re-injection

Lead Agency: Regional Water Quality Control Board, Los Angeles Region

Contact Person: David Koo

Mailing Address: 320 West 4th Street, Suite 200

Phone: (213) 620-6155

City: Los Angeles

Zip: 90013

County: Los Angeles

Project Location: County: Los Angeles, Ventura, Kern City/Nearest Community: Various

Cross Streets: _____ Zip Code: _____

Longitude/Latitude (degrees, minutes and seconds): _____ ° _____ ' _____ " N / _____ ° _____ ' _____ " W Total Acres: _____

Assessor's Parcel No.: _____ Section: _____ Twp.: _____ Range: _____ Base: _____

Within 2 Miles: State Hwy #: _____ Waterways: _____

Airports: _____ Railways: _____ Schools: _____

Document Type:

CEQA: NOP Draft EIR NEPA: NOI Other: Joint Document
 Early Cons Supplement/Subsequent EIR EA Final Document
 Neg Dec (Prior SCH No.) _____ Draft EIS Other: _____
 Mit Neg Dec Other: _____

Local Action Type:

General Plan Update Specific Plan Rezone Annexation
 General Plan Amendment Master Plan Prezone Redevelopment
 General Plan Element Planned Unit Development Use Permit Coastal Permit
 Community Plan Site Plan Land Division (Subdivision, etc.) Other: WDR Permit

Development Type:

Residential: Units _____ Acres _____ Transportation: Type _____
 Office: Sq.ft. _____ Acres _____ Employees _____ Mining: Mineral _____
 Commercial: Sq.ft. _____ Acres _____ Employees _____ Power: Type _____ MW _____
 Industrial: Sq.ft. _____ Acres _____ Employees _____ Waste Treatment: Type Groundwater MGD Various
 Educational: _____ Hazardous Waste: Type _____
 Recreational: _____ Other: _____
 Water Facilities: Type _____ MGD _____

Project Issues Discussed in Document:

Aesthetic/Visual Fiscal Recreation/Parks Vegetation
 Agricultural Land Flood Plain/Flooding Schools/Universities Water Quality
 Air Quality Forest Land/Fire Hazard Septic Systems Water Supply/Groundwater
 Archeological/Historical Geologic/Seismic Sewer Capacity Wetland/Riparian
 Biological Resources Minerals Soil Erosion/Compaction/Grading Growth Inducement
 Coastal Zone Noise Solid Waste Land Use
 Drainage/Absorption Population/Housing Balance Toxic/Hazardous Cumulative Effects
 Economic/Jobs Public Services/Facilities Traffic/Circulation Other: _____

Present Land Use/Zoning/General Plan Designation:

The general WDRs will apply to sites throughout the Los Angeles Region, including areas with all types of land uses and settings.

Project Description: (please use a separate page if necessary)

See the attached page.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X".
If you have already sent your document to the agency please denote that with an "S".

<input checked="" type="checkbox"/> Air Resources Board	<input checked="" type="checkbox"/> Office of Historic Preservation
<input type="checkbox"/> Boating & Waterways, Department of	<input checked="" type="checkbox"/> Office of Public School Construction
<input checked="" type="checkbox"/> California Emergency Management Agency	<input type="checkbox"/> Parks & Recreation, Department of
<input type="checkbox"/> California Highway Patrol	<input type="checkbox"/> Pesticide Regulation, Department of
<input type="checkbox"/> Caltrans District # _____	<input checked="" type="checkbox"/> Public Utilities Commission
<input type="checkbox"/> Caltrans Division of Aeronautics	<input type="checkbox"/> Regional WQCB # _____
<input type="checkbox"/> Caltrans Planning	<input type="checkbox"/> Resources Agency
<input type="checkbox"/> Central Valley Flood Protection Board	<input type="checkbox"/> Resources Recycling and Recovery, Department of
<input type="checkbox"/> Coachella Valley Mtns. Conservancy	<input type="checkbox"/> S.F. Bay Conservation & Development Comm.
<input type="checkbox"/> Coastal Commission	<input checked="" type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
<input type="checkbox"/> Colorado River Board	<input type="checkbox"/> San Joaquin River Conservancy
<input type="checkbox"/> Conservation, Department of	<input type="checkbox"/> Santa Monica Mtns. Conservancy
<input type="checkbox"/> Corrections, Department of	<input type="checkbox"/> State Lands Commission
<input type="checkbox"/> Delta Protection Commission	<input type="checkbox"/> SWRCB: Clean Water Grants
<input type="checkbox"/> Education, Department of	<input checked="" type="checkbox"/> SWRCB: Water Quality
<input type="checkbox"/> Energy Commission	<input type="checkbox"/> SWRCB: Water Rights
<input checked="" type="checkbox"/> Fish & Game Region # <u>5</u>	<input type="checkbox"/> Tahoe Regional Planning Agency
<input type="checkbox"/> Food & Agriculture, Department of	<input checked="" type="checkbox"/> Toxic Substances Control, Department of
<input type="checkbox"/> Forestry and Fire Protection, Department of	<input checked="" type="checkbox"/> Water Resources, Department of
<input type="checkbox"/> General Services, Department of	Other: _____
<input checked="" type="checkbox"/> Health Services, Department of	Other: _____
<input checked="" type="checkbox"/> Housing & Community Development	
<input checked="" type="checkbox"/> Native American Heritage Commission	

Local Public Review Period (to be filled in by lead agency)

Starting Date June 20, 2014

Ending Date July 21, 2014

Lead Agency (Complete if applicable):

Consulting Firm: _____	Applicant: _____
Address: _____	Address: _____
City/State/Zip: _____	City/State/Zip: _____
Contact: _____	Phone: _____
Phone: _____	

Signature of Lead Agency Representative: _____

Date: 6/27/2014

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Project Description:

The Regional Water Quality Control Board, Los Angeles Region (Regional Board), proposes to adopt General Waste Discharge Requirements (WDRs) for groundwater remediation at sites impacted by discharges of waste, including petroleum hydrocarbon fuel, volatile organic compounds and inorganic contaminants. Pursuant to the Porter-Cologne Water Quality Control Act (Cal. Water Code §§ 13000 et seq.), the Regional Board adopted General Waste Discharge Requirements Order No. R4-2002-0030 (General WDRs) on January 24, 2002, that regulated discharges of waste associated with groundwater remediation at petroleum hydrocarbon fuel, volatile organic compound and/or hexavalent chromium impacted sites. Those General WDRs have been revised by Order No. R4-2005-0030 adopted on May 5, 2005, and by Order No. R4-2007-0019, adopted on March 1, 2007. Order No. R4-2007-0019 authorized the use of a variety of materials for in-situ remediation purposes, including oxidation/aerobic degradation enhancement compounds, reducing/reductive degradation enhancement compounds, inorganics/nutrients, carbon sources/electron donors, and study tracer compounds. Subsequent to adoption of the initial General WDRs, these WDRs have been revised to include the use of additional treatment compounds. This Regional Board intends to adopt revised General WDRs to accommodate the new materials that have been effectively used to remediate wastes in groundwater and soil.

Wastes, including petroleum hydrocarbon fuel, volatile organic compounds and inorganic contaminants, have impacted groundwater at various sites throughout the Los Angeles Region and cause or threaten to cause adverse impacts to existing and potential beneficial uses of the region's groundwater resources. Remediation/cleanup of groundwater at these sites includes the use and application of chemical, biological, and physical treatment processes, such as oxygen enhanced process, chemical oxidation, chemical reduction, nutrient or chemical addition for enhanced biodegradation, or groundwater pump and treat technology with the return of treated groundwater to the same aquifer zone in some cases. The application of these materials may result in discharges of waste that could impact the beneficial uses. The proposed general WDRs authorize the application of these materials and contain conditions to minimize impacts caused by the application of the materials and require compliance with water quality standards. The adoption of general WDRs for in-situ groundwater remediation/cleanup or the extraction of polluted groundwater with above ground treatment and the return of treated groundwater to the same aquifer zone would: (a) simplify the application process for dischargers, (b) allow more efficient use of Regional Board staff time, (c) reduce Regional Board time by enabling the Executive Officer to notify the discharger of the applicability of the General WDRs, (d) enhance the protection of surface water quality by eliminating the discharge of treated groundwater to surface waters, (e) preserve water resources by re-injection of treated groundwater into aquifers, and f) provide a level of protection comparable to individual, site-specific WDRs.

Los Angeles Regional Water Quality Control Board

NOTICE OF PREPARATION OF MITIGATED NEGATIVE DECLARATION CALIFORNIA ENVIRONMENTAL QUALITY ACT

TO ALL INTERESTED AGENCIES, GROUPS AND PERSONS:

This will serve as notice that the Regional Water Quality Control Board, Los Angeles Region (Regional Board) has prepared a Mitigated Negative Declaration for the following project in accordance with the provisions of the California Environmental Quality Act (CEQA).

Project Title: General Waste Discharge Requirements for In-Situ Groundwater Remediation and Groundwater Re-injection.

Project location: Throughout the Regional Board's jurisdiction, including portions of Los Angeles, Ventura, and Kern Counties.

Project Description: The Regional Water Quality Control Board, Los Angeles Region (Regional Board), proposes to adopt General Waste Discharge Requirements (WDRs) for groundwater remediation at sites impacted by discharges of waste, including petroleum hydrocarbon fuel, volatile organic compounds and inorganic contaminants. Pursuant to the Porter-Cologne Water Quality Control Act (Cal. Water Code §§ 13000 et seq.), the Regional Board adopted General Waste Discharge Requirements Order No. R4-2002-0030 (General WDRs) on January 24, 2002, that regulated discharges of waste associated with groundwater remediation at petroleum hydrocarbon fuel, volatile organic compound and/or hexavalent chromium impacted sites. Those General WDRs have been revised by Order No. R4-2005-0030 adopted on May 5, 2005, and by Order No. R4-2007-0019, adopted on March 1, 2007. Order No. R4-2007-0019 authorized the use of a variety of materials allowed for in-situ remediation purposes, including oxidation/aerobic degradation enhancement compounds, reducing/reductive degradation enhancement compounds, inorganics/nutrients, carbon sources/electron donors, and study tracer compounds. Subsequent to adoption of the initial General WDRs, these WDRs have been revised to include the use of additional treatment compounds, including ozone and use of trace materials. This Regional Board intends to adopt revised General WDRs to accommodate the new materials that have been effectively used to remediate wastes in groundwater and soil.

Wastes, including petroleum hydrocarbon fuel, volatile organic compounds and inorganic contaminants, have impacted groundwater at various sites throughout the Los Angeles Region and cause or threaten to cause adverse impacts to existing and potential beneficial uses of the region's groundwater resources. Remediation/cleanup of groundwater at these sites includes the use and application of chemical, biological, and physical treatment processes, such as oxygen enhanced process, chemical oxidation, chemical reduction, nutrient or chemical addition for enhanced biodegradation, or groundwater pump and treat technology with the return of treated groundwater to the same aquifer zone in some cases. The application of these materials may result in discharges of waste that could impact the beneficial uses. The proposed general WDRs authorize the application of these materials and contain conditions to minimize impacts caused by

the application of the materials and require compliance with water quality standards. The adoption of general WDRs for in-situ groundwater remediation/cleanup or the extraction of polluted groundwater with above ground treatment and the return of treated groundwater to the same aquifer zone would: (a) simplify the application process for dischargers, (b) allow more efficient use of Regional Board staff time, (c) reduce Regional Board time by enabling the Executive Officer to notify the discharger of the applicability of the General WDRs, (d) enhance the protection of surface water quality by eliminating the discharge of treated groundwater to surface waters, (e) preserve water resources by re-injection of treated groundwater into aquifers, and f) provide a level of protection comparable to individual, site-specific WDRs.

An Initial Study has been conducted by the Regional Board, which documents the reasons to support the Finding of the Mitigated Negative Declaration that the project will not have a significant adverse effect on the environment. The Initial Study and the Mitigated Negative Declaration are on file at the address above and are available for public examination at the Regional Board, Monday through Friday between the hours of 8:00 a.m. to 5:00 p.m.

All interested agencies, groups and persons wishing to respond to the finding of Mitigated Negative Declaration are invited to submit written comments to 320 West 4th Street, Suite 200, Los Angeles, California, 90013, for consideration by this Regional Board on or before July 21, 2014. For information, please call Dr. Eric Wu at (213) 576-6683 or email him at eric.wu@waterboards.ca.gov.

Samuel Unger, P.E.
Executive Officer
Regional Water Quality Control Board, Los Angeles Region

Los Angeles Regional Water Quality Control Board

MITIGATED NEGATIVE DECLARATION

Project Title: GENERAL WASTE DISCHARGE REQUIREMENTS FOR IN-SITU GROUNDWATER REMEDIATION AND GROUNDWATER RE-INJECTION

Lead agency name and address: California Regional Water Quality Control Board, Los Angeles Region, 320 West 4th Street, Suite 200, Los Angeles, CA 90013.

Project location: Throughout the Regional Board's jurisdiction, including portions of Los Angeles, Ventura, and Kern Counties.

Project Description: The Regional Water Quality Control Board, Los Angeles Region (Regional Board), proposes to adopt General Waste Discharge Requirements (WDRs) for groundwater remediation at sites impacted by discharges of waste, including petroleum hydrocarbon fuel, volatile organic compounds and inorganic contaminants. Pursuant to the Porter-Cologne Water Quality Control Act (Cal. Water Code §§ 13000 et seq.), the Regional Board adopted General Waste Discharge Requirements Order No. R4-2002-0030 (General WDRs) on January 24, 2002, that regulated discharges of waste associated with groundwater remediation at petroleum hydrocarbon fuel, volatile organic compound and/or hexavalent chromium impacted sites. Those General WDRs have been revised by Order No. R4-2005-0030 adopted on May 5, 2005, and by Order No. R4-2007-0019, adopted on March 1, 2007. Order No. R4-2007-0019 authorized the use of a variety of materials for in-situ remediation purposes, including oxidation/aerobic degradation enhancement compounds, reducing/reductive degradation enhancement compounds, inorganics/nutrients, carbon sources/electron donors, and study tracer compounds. Subsequent to adoption of the initial General WDRs, these WDRs have been revised to include the use of additional treatment compounds, including ozone and use of trace materials. This Regional Board intends to adopt revised General WDRs to accommodate the new materials that have been effectively used to remediate wastes in groundwater and soil.

Wastes, including petroleum hydrocarbon fuel, volatile organic compounds and inorganic contaminants, have impacted groundwater at various sites throughout the Los Angeles Region and cause or threaten to cause adverse impacts to existing and potential beneficial uses of the region's groundwater resources. Remediation/cleanup of groundwater at these sites includes the use and application of chemical, biological, and physical treatment processes, such as oxygen enhanced process, chemical oxidation, chemical reduction, nutrient or chemical addition for enhanced biodegradation, or groundwater pump and treat technology with the return of treated groundwater to the same aquifer zone in some cases. The application of these materials may result in discharges of waste that could impact the beneficial uses. The proposed general WDRs authorize the application of these materials and contain conditions to minimize impacts caused by the application of the materials and require compliance with water quality standards. The adoption of general WDRs for in-situ groundwater remediation/cleanup or the extraction of polluted groundwater with above ground treatment and the return of treated groundwater to the same aquifer zone would: (a) simplify the application process for dischargers, (b) allow more efficient

use of Regional Board staff time, (c) reduce Regional Board time by enabling the Executive Officer to notify the discharger of the applicability of the General WDRs, (d) enhance the protection of surface water quality by eliminating the discharge of treated groundwater to surface waters, (e) preserve water resources by re-injection of treated groundwater into aquifers, and f) provide a level of protection comparable to individual, site-specific WDRs.

Surrounding land uses and setting: Various

General Plan Designation: Various

Zoning: Various

Other public agencies whose approval is required: (e.g. permits, financing approval, or participation agreements): None

This is to advise that the California Regional Water Quality Control Board, Los Angeles Region, acting as Lead Agency, has approved the above described project on September 11, 2014, and has made the following determinations regarding the above described project:

1. The project [] will [x] will not have a significant effect on the environment.
2. [] An Environmental Impact Report was prepared for this project pursuant to the provision of CEQA.
[x] A Negative Declaration was prepared for this project pursuant to the provision of CEQA.
3. Mitigation measures [x] were [] were not made a condition of the approval of the project.
4. A statement of Overriding Consideration [] was [x] was not adopted for this project.

This is to certify that the responses and record of project approval is available to the General Public at the California Regional Water Quality Control Board, Los Angeles Region, 320 West 4th Street, Suite 200, Los Angeles, CA 90013, Phone (213) 576-6660, Fax (213) 576-6640.

Samuel Unger, P.E.
Executive Officer
Regional Water Quality Control Board, Los Angeles Region

DATE: September 11, 2014

ENVIRONMENTAL INFORMATION FORM

Initial Study – Part 1

Date Filed: September 11, 2014

General Information

1. Name and address of developer or project sponsor: Regional Water Quality Control Board, Los Angeles Region (Los Angeles Regional Board)
2. Address of project: Throughout the Los Angeles Regional Board's jurisdiction, including portions of Los Angeles, Ventura, and Kern Counties
Assessor's Block and Lot Number: NA
3. Name, address, and telephone number of person to be contacted concerning this project: Dr. Eric Wu, 320 W. 4th Street, Suite 200, Los Angeles, CA 90013, (213) 576-6683.
4. Indicate number of the permit application for the project to which this form pertains: NA
5. List and describe any other related permits and other public approvals required for this project, including those required by city, regional, state and federal agencies: None
6. Existing zone district: NA
7. Proposed use of sites (Project for which this form is filed): NA

Project Description

Pursuant to the Porter-Cologne Water Quality Control Act (Cal. Water Code §§ 13000 et seq.), the Los Angeles Regional Water Quality Control Board adopted General Waste Discharge Requirements Order No. R4-2002-0030 (General WDRs) on January 24, 2002, that regulated discharges of waste associated with groundwater remediation at petroleum hydrocarbon fuel, volatile organic compound and/or hexavalent chromium impacted sites. Those General WDRs have been revised by Order No. R4-2005-0030 adopted on May 5, 2005, and by Order No. R4-2007-0019, adopted on March 1, 2007. Order No. R4-2007-0019 authorized the use of a variety of materials for in-situ remediation purposes, including oxidation/aerobic degradation enhancement compounds, reducing/reductive degradation enhancement compounds, inorganics/nutrients, carbon sources/electron donors, and study tracer compounds.

Since then, additional materials for in-situ remediation have come into use at sites throughout the Los Angeles Region and elsewhere to address wastes at petroleum hydrocarbon fuel, volatile organic compound, and inorganic contaminant impacted sites. The project consists of the revision of the General WDRs to accommodate the new materials that have been effectively used to remediate wastes at sites within the Los Angeles Region. The individual cleanup projects are subject to additional analysis pursuant to the California Environmental Quality Act.

Are the following items applicable to the project or its effects? Discuss below all items checked "Yes" (attach additional sheets as necessary).

8. Change in existing features of any bays, tidelands, beaches, lakes, or hills, or [] Yes [X] No
substantial alteration of ground contours.
9. Change in scenic views or vistas from existing residential areas or public lands [] Yes [X] No
or roads.

- 10. Change in pattern, scale, or character of general area of project. Yes No
- 11. Significant amounts of solid waste or litter. Yes No
- 12. Change in dust, ash, smoke, fumes, or odors in vicinity. Yes No
- 13. Change in ocean, bay, lake, stream, or groundwater quality or quantity, or alteration of existing drainage patterns. Yes No

During the remediation of wastes in soil and/or groundwater, the application of materials authorized by the General WDRs may result in unintended adverse impacts to groundwater quality. Any potential adverse water quality impacts that may result will be localized, of short-term duration, and will not impact any existing or prospective uses of groundwater. The General WDRs require monitoring of groundwater quality before addition of any materials, during treatment, and after treatment is completed to verify no long-term adverse impact to water quality. The Los Angeles Regional Water Quality Control Board may require responsible parties to take action to correct any impacts to water quality resulting from the application of materials.

- 14. Substantial change in existing noise or vibration levels in the vicinity. Yes No
- 15. Site on filled land or on slope of 10 percent or more. Yes No
- 16. Use or disposal of potentially hazardous materials, such as toxic substances, flammables, or explosives. Yes No
- 17. Substantial change in demand for municipal services (police, fire, water, sewage, etc.). Yes No
- 18. Substantially increase fossil fuel consumption (electricity, oil, natural gas, etc.). Yes No
- 19. Relationship to a larger project or series of projects. Yes No

Environmental Setting

- 20. Describe the project site as it exists before the project, including information on topography, soil stability, plants and animals, and any cultural, historical or scenic aspects. Describe any existing structures on the site, and the use of the structures. Attach photographs of the site. Snapshots or Polaroid photos will be accepted.

No change in the Project Site topography, soil stability, plants, and animals, or any cultural, historical scenic aspects will occur.

- 21. Describe the surrounding properties, including information on plants and animals and any cultural, historical or scenic aspects. Indicate the type of land use (residential, commercial, etc.), intensity of land use (one-family, apartment houses, shops, department stores, etc.), and scale of development (height, frontage, setback, rear yard, etc.). Attach photographs of the vicinity. Snapshots or Polaroid photos will be accepted. NA

Certification

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Signature _____

Samuel Unger, P.E.
Executive Officer
Regional Water Quality Control Board, Los Angeles Region

Date: September 11, 2014

LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD

Initial Study - Part 2

ENVIRONMENTAL CHECKLIST FORM

1. Project title:
In-Situ Groundwater Remediation and Groundwater Re-injection.
2. Lead agency name and address:
California Regional Water Quality Control Board, LA Region
320 West 4th Street, Suite 200
Los Angeles, California 90013
3. Contact person and phone number:
David Koo
(213) 620-6155
4. Project location: Various
5. Project sponsor's name and address: Various
6. General plan designation:
In-Situ Groundwater Remediation and Groundwater Re-injection for petroleum hydrocarbon fuel, volatile organic compound and/or inorganic contaminant impacted sites.
7. Zoning: Commercial/Industrial
8. Description of project:
The Regional Water Quality Control Board, Los Angeles Region (Regional Board), proposes to adopt General Waste Discharge Requirements (WDRs) for groundwater remediation at sites impacted by discharges of waste, including petroleum hydrocarbon fuel, volatile organic compounds and inorganic contaminants. Pursuant to the Porter-Cologne Water Quality Control Act (Cal. Water Code §§ 13000 et seq.), the Regional Board adopted General Waste Discharge Requirements Order No. R4-2002-0030 (General WDRs) on January 24, 2002, that regulated discharges of waste associated with groundwater remediation at petroleum hydrocarbon fuel, volatile organic compound and/or hexavalent chromium impacted sites. Those General WDRs have been revised by Order No. R4-2005-0030 adopted on May 5, 2005, and by Order No. R4-2007-0019, adopted on March 1, 2007. Order No. R4-2007-0019 authorized the use of a variety of materials allowed for in-situ remediation purposes, including oxidation/aerobic degradation enhancement compounds, reducing/reductive degradation enhancement compounds, inorganics/nutrients, carbon sources/electron donors, and study tracer compounds. Subsequent to adoption of the initial General WDRs, these WDRs have been revised to include the use of additional treatment compounds, including ozone and use of trace materials. This Regional Board intends to adopt revised General WDRs to accommodate the new materials that have been effectively used to remediate wastes in groundwater and soil.

Wastes, including petroleum hydrocarbon fuel, volatile organic compounds and inorganic contaminants, have impacted groundwater at various sites throughout the Los Angeles Region and cause or threaten to cause adverse impacts to existing and potential beneficial uses of the region's groundwater resources. Remediation/cleanup of groundwater at these sites includes the use and

application of chemical, biological, and physical treatment processes, such as oxygen enhanced process, chemical oxidation, chemical reduction, nutrient or chemical addition for enhanced biodegradation, or groundwater pump and treat technology with the return of treated groundwater to the same aquifer zone in some cases. The application of these materials may result in discharges of waste that could impact the beneficial uses. The proposed general WDRs authorize the application of these materials and contain conditions to minimize impacts caused by the application of the materials and require compliance with water quality standards. The adoption of general WDRs for in-situ groundwater remediation/cleanup or the extraction of polluted groundwater with above ground treatment and the return of treated groundwater to the same aquifer zone would: (a) simplify the application process for dischargers, (b) allow more efficient use of Regional Board staff time, (c) reduce Regional Board time by enabling the Executive Officer to notify the discharger of the applicability of the General WDRs, (d) enhance the protection of surface water quality by eliminating the discharge of treated groundwater to surface waters, (e) preserve water resources by re-injection of treated groundwater into aquifers, and f) provide a level of protection comparable to individual, site-specific WDRs.

9. Surrounding land uses and setting:

The general WDRs will apply to sites throughout the Los Angeles Region, including areas with all types of land uses and settings.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

Permits will be required by various cities and the County of Los Angeles, County of Ventura, or County of Kern for installation of groundwater monitoring wells and site grading and by other agencies, including the South Coast Air Quality Management District.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology/Soils |
| <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input checked="" type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Transportation/Traffic | <input checked="" type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or

agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all the potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Date: September 11, 2014

Samuel Unger, P.E.
Executive Officer
Los Angeles Regional Water Quality Control Board

EVALUATION OF ENVIRONMENTAL IMPACTS

Potential environmental impacts associated with the proposed project are provided below in a checklist format developed pursuant to the California Environmental Quality Act (CEQA) Guidelines. The checklist has been used to assess the significance or insignificance of each potential impact. Brief explanations of each conclusion are provided after the checklists. Mitigation measures, as required, are discussed below each checklist.

Impact classifications used in the checklist are defined as follows:

“Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an Environmental Impact Report (EIR) is required.

“Less Than Significant with Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from **“Potentially Significant Impact”** to a **“Less Than Significant Impact.”** The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

“Less Than Significant Impact” applies to an effect that would not be significantly adverse.

“No Impact” applies where the effect occurs without impact.

I. AESTHETICS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

The adoption of these General WDRs and the projects eligible for coverage by these General WDRs would not result in any impacts to aesthetics.

Mitigation Measures

Since there would be no impact to aesthetic resources, therefore no mitigation is required.

II. AGRICULTURAL RESOURCES

<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</p>	<p>Potentially Significant Impact</p>	<p>Less Than Significant With Mitigation Incorporated</p>	<p>Less Than Significant Impact</p>	<p>No Impact</p>
<p>a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>				<p>X</p>
<p>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>				<p>X</p>
<p>c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?</p>				<p>X</p>
<p>d) Result in the loss of forest land or conversion of forest land to non-forest use?</p>				<p>X</p>
<p>e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?</p>				<p>X</p>

The adoption of these General WDRs and the projects eligible for coverage by these General WDRs would not result in any impacts to agricultural resources.

Mitigation Measures

Since there would be no impact to agricultural resources, therefore no mitigation is required.

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				X
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		X		
d) Expose sensitive receptors to substantial pollutant concentrations?		X		
e) Create objectionable odors affecting a substantial number of people?		X		

Short term increases in traffic during the construction and installation of some remedial equipment, short term emissions generated by construction equipment, and long-term increases in traffic caused by ongoing maintenance of these devices (e.g., delivery of materials) are potential sources of increased air pollutant emissions. However, emission levels for all pollutants are expected far below the South Coast Air Quality Management District (SCAQMD) Air Quality Significance thresholds. Some remedial devices (e.g., pump) may be a source of objectionable odors, but the impact will be at localized areas for a short-term duration.

Mitigation Measures

Mitigation measures for increased air emissions due to increased vehicle trips or use of construction equipment and remedial devices include: 1) use of construction, and maintenance vehicles with lower emission engines, 2) use of soot reduction traps or diesel particulate filters, and 3) use of emulsified diesel

fuel. Mitigation measures to eliminate odors include covers, aeration, filters, barriers, and/or odor suppressing chemical additives.

IV. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
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The adoption of these General WDRs and the projects eligible for coverage by these General WDRs would not result in any impacts to biological resources.

Mitigation Measures

Since there would be no impact to biological resources, therefore no mitigation is required.

V. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resources pursuant to §15064.5?				X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside of formal cemeteries?				X

The projects eligible for coverage by these General WDRs should avoid any historic, archaeological, paleontological or unique geologic resources and should not cause any impacts to any cultural resources.

Mitigation Measures

Since there would be no impact to cultural resources, therefore no mitigation is required.

VI. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (ii) Strong seismic ground shaking? (iii) Seismic-related ground failure, including liquefaction? (iv) Landslides? 				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks of life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?				X

During remediation, soil maybe removed to install remedial equipment. However, the impact will be localized, of short-term duration, and will result in less than significant soil erosion and the loss of topsoil.

Mitigation Measures

The dischargers who are eligible for coverage by these General WDRs shall prepare erosion control plan to mitigate the possible impacts. The mitigation measures may include buffer strip, mulching, riprap, sand fence, terracing, windbreaks, and vegetated waterway (bioswale).

VII. GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X

The greenhouse gas emissions from additional traffic and operation of remedial equipment will be minor, localized, of short-term duration, and will have less than significant impacts to the environment.

Mitigation Measures

The projects eligible for coverage by these General WDRs would result in less than significant greenhouse gas emissions. Therefore, mitigation measures are not required.

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			X	
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			X	
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

The personnel who implements the proposed project shall be trained regarding potential safety and health risks associated with the activities as described in the site-specific and contractor specific Health and Safety Plans. The health and safety training and monitoring plans will limit hazardous material or waste discharged to the public and the environment.

Mitigation Measures

The projects eligible for coverage by these General WDRs would result in less than significant hazards or hazardous materials impacts associated with the public, therefore no mitigation is required. However, a contingency plan shall be developed and maintained on site. The contingency plan shall detail appropriate actions to be taken in order to protect human health and the environment in case of any spill, plume migration or failure related to the operation or inappropriate operation of the treatment system.

IX. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially degrade groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or surface runoff in a manner which would result in flooding on- or offsite?				X
e) Create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f) Otherwise substantially degrade water quality?			X	
g) Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X

The application of materials specified in Attachment A may result in unintended adverse impacts to groundwater quality, but impacts that may result will be localized, of short-term duration, and will not impact any existing or prospective beneficial uses of groundwater. The addition of materials specified in Attachment A will improve groundwater conditions by promoting complete degradation of wastes, including petroleum hydrocarbon fuel, volatile organic compounds, and inorganic contaminants.

The General WDRs require that a groundwater sampling and analysis program shall be conducted prior to, during, and post addition of proposed materials to closely monitor groundwater effects. Groundwater monitoring will be conducted from existing site monitoring and observation wells and any additional wells deemed necessary to monitor performance within the respective treatment areas. Analysis will include (1) general electron acceptors, (2) general electron donors, (3) indicator parameters (e.g. temperature, pH, conductivity, and Oxidation Reduction Potential), (4) arsenic, (5) by-products (e.g. calcium, sulfide and sulfate), and (6) hexavalent chromium and degradation products (e.g. hexavalent chromium and total dissolved chromium in plumes that contain both hexavalent chromium and volatile organic compounds).

Progressive changes in local groundwater quality will occur over a relatively short period of time, leading to an overall groundwater quality improvement. For biological processes, intermediate byproducts for volatile organic compounds (cis-1,2-dichloroethene and vinyl chloride) are expected to be generated as part of the biodegradation pathway; however, these products will be degraded anaerobically within the reactive zone or aerobically downgradient of the reactive zone in the case of vinyl chloride. These local conditions are expected to reverse over a period of time after amendment delivery has stopped.

The Discharger shall provide hydraulic control and complete containment of injected chemicals and wastes, including petroleum hydrocarbon fuel, volatile organic compounds, and inorganic contaminants, if any are observed to be migrating off-site.

X. LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

The adoption of these General WDRs and the projects eligible for coverage by these General WDRs would not result in any impacts to land use and planning.

Mitigation Measures

Since there would be no impact to land use and planning, therefore no mitigation is required.

XI. MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

The adoption of these General WDRs and the projects eligible for coverage by these General WDRs would not result in any impacts to mineral resources.

Mitigation Measures

Since there would be no impact to mineral resources, therefore no mitigation is required.

XII. NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantially temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Noise levels generated from remedial equipment will less likely exceed the standards established in the local general plan or noise ordinance. The adoption of these General WDRs and the projects eligible for coverage by these General WDRs would result in less than significant impacts to noise level.

Mitigation Measures

Since there would be less than significant impact to noise level, therefore no mitigation is required.

XIII. POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

The remedial activities may allow property owners to redevelop the land for residential or commercial uses. However, the adoption of these General WDRs and the projects eligible for coverage by these General WDRs will not change any land use type, or general plan governed by the local agencies.

Mitigation Measures

The projects eligible for coverage by these General WDRs may cause less than significant impact. Any resulting impacts can be mitigated at the project level when redevelopment occurs.

XIV. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?				X
Police protection?				X
Schools?				X
Parks?				X
Other public facilities?				X

The adoption of these General WDRs and the projects eligible for coverage by these General WDRs would not result in any impacts to public services.

Mitigation Measures

Since there would be no impact to public services, therefore no mitigation is required.

XV. RECREATION

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

The adoption of these General WDRs and the projects eligible for coverage by these General WDRs would not result in any recreation impacts.

Mitigation Measures

Since there would be no recreation impacts, therefore no mitigation is required.

XVI. TRANSPORTATION AND TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				X
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?		X		
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

The adoption of these General WDRs and the projects eligible for coverage by these General WDRs may result in temporary alterations to existing transportation systems during construction of remedial systems. But the potential impacts are limited and short-term.

Mitigation Measures

Potential impacts could be reduced by limiting or restricting hours of construction so as to avoid peak traffic times and by providing temporary traffic signals and flagging to facilitate traffic movement. Local permitting agencies will require implementation of this mitigation.

XVII. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X

The adoption of these General WDRs and the projects eligible for coverage by these General WDRs would not result in any impacts related to utilities or service systems.

Mitigation Measures

Since there would be no impact to utilities or service systems, therefore no mitigation is required.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				X
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects)				X
c) Does the project have environmental effects which will cause substantially adverse effects on human beings, either directly or indirectly?				X

As discussed throughout this document and with the implementation of the Regional Board approved remediation plan and associated addenda, and General Waste Discharge Requirements, the proposed project would not result in any significant impacts to the quality of the environment, nor would it substantially affect biological resources and associated habitats or eliminate important examples of California history or prehistory.

The adoption of these General WDRs and the projects eligible for coverage by these General WDRs would not result in significant cumulative impacts.

As indicated in this document, the adoption of these General WDRs and the projects eligible for coverage by these General WDRs are expected to result in positive benefits of improving groundwater quality.

#	Comments	Response to Comments
Kurt Souza, State Water Resources Control Board, Division of Drinking Water July 16, 2014		
	<p>Because these WDRs are related to chemicals and microbes used in in-situ groundwater remediation and groundwater reinjection associated with hazardous waste site cleanup, we believe the risks to people using current drinking water sources is minimal.</p> <p>However, should treated groundwater from a hazardous waste site be proposed to be used to augment drinking water supplies, or should a public drinking water system seek to utilize such treated water as a source of drinking water, our district offices should be contacted to provide regulatory oversight.</p> <p>Associated with this would be a determination as to whether the treated source should be considered an impaired source of drinking water (and subject to our 97-005 process).</p> <p>Where microbial remediation has been used, we may recommend additional microbiological monitoring and propose additional disinfection (chlorination) requirements. It may also be appropriate to contact the California Department of Public Health's Microbial Diseases Laboratory to seek addition input on the potential risks from the microbial consortia used in groundwater treatment, should any residual organisms remain post-treatment.</p>	<p>Regional Board staff agrees that risks are minimal, and in fact the use of these remediation materials and amendments will reduce risks to the public.</p> <p>This Tentative Order does not allow direct use of treated groundwater as a drinking water source, only in-situ groundwater treatment or extraction and re-injection back into groundwater following treatment.</p> <p>Comment noted. The bioaugmentation organisms included in Attachment A of the Tentative Order have all been successfully and safely used at multiple sites to remediate wastes and have been approved by the working group that was established in mid-2013. The Regional Board may require additional monitoring as appropriate.</p>
Alan Hodges, CH2M HILL July 21, 2014		
1	<p><u>Recycle, reuse, and reinjection of extracted groundwater and clarification of background concentration</u> – The permit allows the reinjection of treated groundwater into the same aquifer as it was extracted from with a general mineral content at concentrations not exceeding the original background as stated in Item 15 of the tentative Order no. R4-2014-XXXX: "Treated groundwater that exhibits general mineral content that is naturally occurring and exceeds Basin Plan Objectives may be returned to the same groundwater aquifers from which it is withdrawn, with concentrations not exceeding the original background concentrations for the site."</p>	

#	Comments	Response to Comments
<p>Alan Hodges, CH2M HILL July 21, 2014</p>		
	<p>A very effective remediation approach where groundwater is extracted downstream of a contaminant plume, amendments added above ground, and re-injected into the treatment zone has been used throughout California and the nation. The groundwater that is re-injected has not necessarily been treated and may not have general mineral content at background levels. However, re-injection of the extracted groundwater with the amendments has been able to effectively remediate the contaminated groundwater. Also, by extracting downgradient of the plume and re-injecting upgradient, a treatment system can distribute amendments in the groundwater much more effectively and efficiently.</p> <p>Therefore, we respectfully request that the following language be included in Item 15 of the Order:</p> <p><i>“Extracted groundwater to which approved amendments listed in Attachment A have been added to remediate a contaminant plume, but which may exhibit general mineral content that exceeds the original background concentrations for the site, also may be returned to the same groundwater aquifers from which it is withdrawn, but only within the treatment zone.”</i></p> <p>CH2M HILL also requests the rewording of Item 4 and Item 5 in the Section F provisions. The language proposed for Section F item 4 is shown in Comment 2 of this letter. We respectfully request that the following language be added to Item 5 of the Section F provisions:</p> <p><i>“Re-injection or reuse of treated groundwater shall be limited to the same aquifer where the impacted groundwater was withdrawn from for treatment. Re-injection of groundwater with added amendments shall be limited to the treatment zone within the same aquifer where the impacted groundwater was withdrawn.”</i></p> <p>Because of temporal variability, a one-time sampling event will not determine representative background concentrations. Also, an increase in a measured parameter above background is not necessarily an indication of an impact created by the injected amendments. Therefore, we respectfully request a clarification on how a violation of this order due to an exceedance above background will be determined. Will a margin</p>	<p>Regional Board staff agree with the comment and the text of the Tentative Order has been revised accordingly to read: “Re-injection of treated groundwater containing materials or amendments authorized by this Order and that may exhibit general mineral content exceeding the original background concentrations may be returned to the same groundwater aquifer within the treatment zone for the purpose of remediating groundwater, if it does not exacerbate the existing groundwater pollution.”</p> <p>Regional Board staff agree with the comment and the text of the Tentative Order has been revised to read: <i>“Re-injection of treated groundwater to which materials or amendments have been added shall be limited to the same aquifer and within the treatment zone.”</i></p> <p>This determination of background assessment is best handled in each site-specific work plan.</p>

#	Comments	Response to Comments
Alan Hodges, CH2M HILL July 21, 2014		
	<p>above background be established or will the determination of whether a violation has occurred be at the discretion of the executive officer?</p>	
2	<p><u>Prohibition of discharging outside of “area under the control” of the Discharger</u> – Section D, Discharge Prohibitions Item 8 of the Tentative Order R4-2014-XXXX states: “The discharge of wastes or amendments to property that is not under the control of the Discharger is prohibited. The “area under the control” of the Discharger is considered to be at the borders of the waste plume and owned by the Discharger and/or where the Discharger holds an agreement for purposes of investigation and remediation.”</p> <p>There are times that the treatment zone, as defined in the Work Plan or in the Report of Waste Discharge, is outside the “area under the control” of the Discharger because either the plume has moved outside the area under the control of the Discharger or the owner of the property where the treatment zone is located has changed. However, the former owner is still responsible for the remediation of the plume. Furthermore, remediation of the petroleum hydrocarbon fuel, volatile organic compounds, and inorganic contaminants found in the groundwater at various sites is beneficial to the general public and the owners of the property. Therefore, we respectfully request that the language in Section D Discharge Prohibitions, Item 8 be replaced with:</p> <p><i>“The discharge of wastes or amendments outside of the treatment zone, as defined in the Work Plan and the Report of Waste Discharge, is prohibited.”</i></p> <p>Section F, Provisions Item 4 also states that: “The application of materials or the re-injection or reuse of treated groundwater shall only be at a site owned or controlled by the discharger.” We respectfully request that this language be changed to:</p> <p><i>“The application of amendments, the re-injection of treated groundwater, and/or the reinjection of groundwater combined with amendments outside the treatment zone, as defined in the Work Plan and the Report of Waste Discharge, is prohibited.”</i></p>	<p>Regional Board staff agrees generally with the concept. Section D, Item 8 has been revised as follows: <i>“The discharge of wastes or amendments to property that is not under the control of the Discharger is prohibited. The “area under the control” of the Discharger is defined to be at the borders of the treatment zone at areas owned by the Discharger and/or where the Discharger holds an agreement for purposes of investigation and remediation.”</i></p> <p>See above amendment.</p>
3	<p><u>Prohibition of by-products beyond the boundaries controlled by the Discharger</u> – Section D Discharge Prohibitions Item 9 of the Tentative Order R4-2014-XXXX states that: “The migration of any by-products</p>	

#	Comments	Response to Comments
<p>Alan Hodges, CH2M HILL July 21, 2014</p>		
	<p>produced as part of the treatment process beyond the boundaries of the property owned or controlled by the discharger or to surface waters is prohibited.”</p> <p>Again, there are times that the treatment zone will be in areas that are outside the control of the discharger. However, remediation of these areas is beneficial to the public. Therefore, we respectfully request that the language in Section D, Discharge Prohibitions Item 8 be replaced with:</p> <p>“The migration of any by-products produced as part of the treatment process beyond the treatment zone, as defined in the Work Plan and the Report of Waste Discharge, is prohibited.”</p> <p>Also, we recommend the prohibition of by-products to surface waters be included in Section D Discharge Prohibitions Item 6:</p> <p>“The discharge of amendments or wastes and the migration of by-products produced as part of the treatment process to surface water or surface water drainage courses is prohibited.”</p>	<p>The comment is appreciated. The existing language in the Tentative Order already addresses the concern.</p> <p>Surface water is already addressed in the Tentative Order in Item D.6.</p>
4	<p><u>Discharge Limitations based on Maximum Contaminant Levels (MCLs)</u> - We respectfully request that Item 3 of Section E, Discharge Limitations, be reworded to reflect that background water quality may already exceed Maximum Contaminant Levels (MCLs) prior to the injection of amendments or treated water. Therefore, we request the following language in Item 3 of Section E. Discharge Limitations:</p> <p>“The discharge of wastes shall not cause the concentrations of chemical constituents and radionuclides of the receiving groundwater designated for use as domestic or municipal supply at the compliance point, downgradient outside the application area, to be in excess of the Maximum Contaminant Levels (MCLs), unless background concentrations already exceed MCLs before the discharge of wastes. The MCLs are specified in the following provisions of Title 22 of the California Code of Regulations which are....”</p>	<p>The term “cause” in the Tentative Order adequately indicates that an MCL exceedance must be the result of the waste discharge, rather than pre-existing conditions, and already adequately recognizes that background levels above an MCL would not be considered a discharger’s cause.</p>
5	<p><u>Discharge Limitations based on Water Quality Objectives (WQOs)</u> – CH2M HILL respectfully requests that item 5 of Section E, Discharge Limitations, be reworded to reflect that background water quality may already exceed WQOs prior to the injection of amendments or treated</p>	<p>Regional Board staff believe that the term “cause” adequately indicates that a WQO exceedance must be the result of the waste discharge, rather than pre-existing conditions, and already adequately recognizes that background levels above a WQO would not be considered a discharger’s cause.</p>

#	Comments	Response to Comments
<p>Alan Hodges, CH2M HILL July 21, 2014</p>		
	<p>water. Therefore, we request the following language in Item 5 of Section E, Discharge Limitations:</p> <p>“Wastes discharge shall not contain salts, heavy metals, or organic constituents at levels that would cause the receiving groundwater at the compliance point, downgradient outside the application area, to exceed WQOs for groundwater or groundwater that may be in hydraulic connection with surface waters designated for marine aquatic life or body contact recreation, <i>unless the receiving groundwater at the compliance point already exceeds WQOs before the discharge of wastes.</i>”</p>	
6	<p><u>Clarification of items in Attachment A</u> – Dehalococcoides (DHC) is now on the approved list on this Tentative General Waste Discharge Requirement Order No. R4-2014-XXXX. However, SiREM’s KB-1 product is the only one listed in Attachment A. Is SiREM’s KB-1 product the only product approved for injection under this order or can other DHC products be used, such as Terra Systems TSI-DC product (MSDS attached)?</p> <p>Calcium Carbonate is also now on the approved list on this Tentative Order. We respectfully request the use of Neutral Zone (MSDS attached) as a pH buffer. Neutral Zone is 40 to 45 percent by weight calcium carbonate, 40 to 50 percent water, 3 to 7 percent ethyl alcohol, and less than 1 percent of a proprietary, non-toxic additive. The use of Neutral Zone:</p> <ol style="list-style-type: none"> a. is effective for keeping pH at levels conducive to bioremediation and thereby effective to remediate target constituents, b. will cause minimum degradation to water quality outside of the treatment zone and will not contribute to exceedances of water quality objectives outside of the treatment zone, c. will assist in remediating contaminated groundwater and thereby protect human health and safety, d. has been used and has been on the market for more than three years. 	<p>SiREM’s KB-1 product is not listed in Attachment A. No specific brand name products are specifically listed – if all of a particular product’s contents are allowed by the Order, then that product is permitted to be used. Supporting documentation for an Attachment A material, in this case KB-1 information and studies to demonstrate that DHC meets Eligibility criteria A.3.a through d, does not mean that KB-1 is the only product containing DHC that is allowed to be used under this WDR Order. Other products may be used if they contain the materials, and only those materials, listed in Attachment A.</p> <p>A working group including interested members of the public was convened in mid-2013 and considered a large variety of injection materials/amendments. Those that met all four criteria under Item A.3 of the Tentative Order have been included in Attachment A. Calcium carbonate is on Attachment A, and ethyl alcohol (i.e., ethanol) is also in Attachment A, although the “proprietary non-toxic additives” in Neutral Zone are not clearly in Attachment A. Specific products that contain materials other than those listed in Attachment A may be considered as part of a site-specific individual WDR permit application, or next time the WDR is updated if sufficient documentation is provided during the evaluation process.</p>