ATTACHMENT A
CALIFORNIA WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

RESOLUTION NO. R3-2008-0010
May 9, 2008

GENERAL WAIVER
FOR
SPECIFIC TYPES OF DISCHARGES

A. GENERAL WAIVER CONDITIONS

These general conditions apply to all discharges enrolled in the General Waiver:

1. The discharge shall not impair beneficial uses of the receiving groundwater or cause an exceedance of water quality objectives. Groundwater beneficial uses and water quality objectives are set forth in Chapter 2 and Chapter 3 of the Water Quality Control Plan for the Central Coast Region (Basin Plan).

2. Discharges shall be consistent with State Water Resources Control Board's "Policy with Respect to Maintenance of the High Quality of Waters of the State" (Resolution No. 68-16) and the Central Coast Water Board antidegradation policy. Resolution No. 68-16 requires that the existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements and incorporates by reference both the State and federal antidegradation policies in Chapter 5, Section I.B and Appendix A-2.

3. Discharge of waste classified as "hazardous," as defined in California Code of Regulations, Title 23, Division 3, Chapter 15, Article 2, Section 2521, or "designated," as defined in California Water Code Section 13173, is prohibited.

4. Creation of a condition of contamination, pollution, or nuisance as defined by California Water Code Sections 13050(k)[1], 13050(l)[2], and 13050(m)[3] is prohibited.

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[1] Section 13050(k) of the California Water Code describe "contamination" as an impairment of quality of the water of the state by waste to a degree which creates a hazard to the public health through poisoning of through the spread of disease. Contamination includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.

[2] Section 13050(l) of the California Water Code describes "pollution" as an alteration of the quality of waters of the state by waste to a degree which unreasonably affects either beneficial uses (as described in Chapter 2 of the Central Coast Water Quality Control Plan) and facilities which serve these beneficial uses. Furthermore, pollution may include contamination.

[3] Section 13050(m) of the California Water Code describes a "nuisance" as anything which meets all of the following requirements: 1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction of the free use of property, so as to interfere with the comfortable enjoyable of life or property. 2) Affects at the same time an entire community or neighborhood, or any considerable number of persons. Although the extent of the annoyance or damage inflicted upon individuals may be unequal. 3) Occurs during, or as a result of, the treatment or disposal of waste.

5. Discharge (including overflow, bypass, seepage, and over spray) to surface waters or surface water drainage courses is prohibited.

6. Discharge, either directly or indirectly, to areas not identified in the report of waste discharge or equivalent document is prohibited (except Section C discharges).

7. If the report of waste discharge or equivalent document describes a treatment facility, bypass of the treatment facility and discharge of untreated or partially treated waste to the disposal area are prohibited (except Section C discharges).

8. Discharges not specifically described in the report of waste discharge or equivalent document are prohibited (except Section C discharges).

9. Discharges of radioactive substances and chemical and biological warfare agents are prohibited. Discharges of waste containing substances in concentrations toxic to human, plant, animal, or aquatic life are prohibited.

10. Waiver enrollments may include discharge-specific expiration dates, after which discharge is prohibited unless an extension is granted or a new enrollment is issued.

11. Compliance with a monitoring and reporting program may be required on a case-by-case basis.

12. Central Coast Water Board staff be allowed entry onto discharge generation and disposal sites to determine compliance with waiver conditions.

13. The discharger shall notify the Central Coast Water Board whenever there is a substantial change in the volume or character of the enrolled discharge. The notice must include information on the quality and quantity of the waste discharge being modified and the anticipated impact of the waste upon the quantity and quality of the aggregate discharge.

14. Issuance of a waiver will not override other more stringent local, state, or federal regulations prescribed by other agencies or departments.

Failure to comply with general and discharge-specific waiver conditions terminates enrollment in the waiver, reinstates all California Water Code sections previously waived, and may result in enforcement action. Although a discharge may qualify for waiver enrollment, the Central Coast Water Board retains the right to terminate waiver enrollment at any time and regulate the discharge under other programs and/or orders (such as other waivers, general waste discharge requirements, individual waste discharge requirements, enforcement orders, etc.).

B. WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR LISTED SPECIFIC TYPES OF DISCHARGES

This Section B contains a list of types of discharges for which Resolution No. R3-2008-0010 grants a waiver of the requirement to obtain waste discharge requirements, but not a waiver of the requirement to submit a report of waste discharge. The Central Coast Water Board Executive Officer may enroll a discharge in this General Waiver if the discharge fits the specified type of discharge and complies with the applicable conditions specified in this Section B and in Attachment A, Section A. To be enrolled in this General Waiver, the discharger must submit a report of waste discharge to the Central Coast Water Board, and a one-time fee equal to the minimum annual fee identified in the fee schedule. [Waiver of California Water Code Section 13263(a)]. The enrollment requirement table is provided in Attachment B of the General Waiver. The discharger may not discharge under this General Waiver until the discharger has received formal notification in writing from the Executive Officer.

1. Directional Drilling Muds

This section applies to drilling muds from horizontal drilling, and specifically excludes muds from monitoring wells at cleanup sites and oil wells. Horizontal drilling muds consist of a clay slurry. Clay and water are added to the borehole to provide lubrication in the drilling process and to aid in the removal of material from the bore. The mud used in directional, onshore drilling projects for cable placement is typically composed of water and fine clay (usually bentonite) and typically does not contain appreciable levels of hazardous materials or soluble waste constituents. Typically, directional drilling activities occur in areas that have a greater potential to affect water quality. The threat to water quality of such materials depends primarily on the additives used. Additives are selected based on soil conditions. Typically, bentonite is used in coarse soils (sands and gravels), polymers are used in fine soils (clay and shale), and surfactants are used in sticky clays. Most often, however, two or more additives are used in combination. With bentonite providing a filter cake, and polymer providing inhibition, the mud usually achieves the properties required to drill successfully in most soil formations. If the slurry material to be spread is free of appreciable additives (additive quantities in conformance with industry standards, the used slurry may be spread on pastures or fields, provided that contact with surface water is avoided and runoff is prevented). Conditions for directional drilling mud disposal include:

a. The discharge shall be spread over an undisturbed, vegetated area capable of absorbing the top-hole water and filtering solids in the discharge, and spread in a manner that prevents a direct discharge to surface waters.

b. The pH of the discharge shall be between 6.5 and 8.3.

c. The discharge shall not contain oil or grease.

d. The discharge area shall not be within 100 feet of a stream, body of water or wetland, nor within streamside riparian corridors.

2. Highway Grinding Slurry

Grinding is generally performed to improve the riding quality of new or existing cement concrete or asphalt concrete pavement. Existing pavements are ground as a rehabilitation strategy, and new pavements may be ground to meet smoothness requirements. Typically, concrete grinding activities involve use of water to cool grinding blades and surfaces. These activities may produce large volumes of slurry and water conservation is encouraged by allowing slurry solids to settle out, then decanting water for reuse in grinding. Water that mixes with ground particles may create a high-pH slurry. Conditions for highway grinding slurry disposal include:

a. The discharger shall implement appropriate management practices to capture and contain grinding slurry (i.e., standard operating procedures, pollution prevention plans, or other material/waste management documents).

b. The discharge shall have a pH between 6.5 and 8.3.

c. Each temporary or permanent highway grinding slurry reuse or disposal site shall be approved by the Executive Officer prior to use.

d. Slurry shall be stored or disposed of only during the dry season (May through October).

e. The discharge area shall not be within 200 feet from a water supply well, nor within 100 feet of a stream, body of water, or wetland, nor outside streamside riparian corridors.

3. Highway Grooving Residues

Grooving is generally performed on roads to increase friction on new or existing cement-concrete or asphalt-concrete pavement. Conditions for highway grooving residue disposal include:

a. Each temporary or permanent highway grooving residue reuse or disposal site shall be approved by the Executive Officer prior to use.

b. The discharger shall implement appropriate management practices to confine grooving residues to lined trenches without overflow (i.e., standard operating procedures, pollution prevention plans, or other material/waste management documents).

c. Lined trenches shall not intercept groundwater.

d. Residues shall be disposed of only during the dry season (May through October).

e. The discharge area shall not be within 200 feet of a water supply well, or within 100 feet of a stream, body of water, or wetland, nor within streamside riparian corridors.

4. Sediment Removal

This type of discharge includes sediment removed from waterbodies (e.g., stock ponds, sediment detention basins, streams, harbors, etc.) as part of a minor dredging operation, flood control project, construction project, or stream alteration project. Leachate (water draining out of the excavated material) may be high in suspended and dissolved solids and could cause turbidity if allowed back into surface waters. Excavated sediment stockpiled near streams may discharge into surface water, especially during rain events. Conditions for sediment removal include:

a. Applicants shall seek review of their project by National Oceanic and Atmospheric Administration and Department of Fish and Game if the project is proposed in waterbodies where special status species reside or if dewatering is proposed in fish-bearing waterbodies.

b. Discharges shall be adequately confined to prevent discharge to surface water.

c. Excavated material shall not be placed where it can be discharged into surface waters.

d. Temporary and final disposal sites shall be described in the report of waste discharge. No spoils shall be located in areas with connectivity to any watercourse.

e. When final disposal of solids to any site other than a landfill is proposed, the discharger shall sample sediment for pesticides, pH, polynuclear aromatic compounds, soluble metals, total extractable petroleum hydrocarbons, total metals, and total organic carbon. Final disposal to other than a landfill requires Executive Officer approval.

f. Riparian or wetland vegetation shall not be impacted as a result of the sediment removal project activities.

g. If temporary or intermittent flows exist onsite, construction will occur when the stream is dry. If groundwater seeps into the work area, it will be pumped to an upland site or other appropriate method.

h. If perennial flows exist on the site, and habitat for special status aquatic/riparian species is not present, the discharger shall install diversion and/or silt controls, such as silt fencing, in a manner that maintains downstream flows during construction and minimizes siltation.

i. If temporary water diversion (in association with the project) is proposed, then a qualified monitor will be on the site during any activities related to water diversion, will inspect the diversion system regularly to ensure proper functioning and protection of water quality and biological resources.

j. Sediment removal activities are limited to the dry season (May through October).

5. Treated Groundwater

Cleanup of groundwater polluted by spills or leaks of wastes, including possibly hazardous substances or hazardous wastes, often involves drawing groundwater from an aquifer that is used, or could be used, as a source of drinking water. The withdrawn groundwater is then typically treated and discharged, either by re-injection, percolation, or infiltration. Some shallow groundwater zones contain naturally occurring general minerals (dissolved solids, chloride, sulfate, nitrate, etc.) or metals in concentrations that exceed Basin Plan Objectives, but are not the result of the pollution. The re-injection or infiltration of treated groundwater, exhibiting natural or anthropogenic derived general mineral content, may be extracted and returned to the same groundwater formation from which it is withdrawn, provided that the concentrations do not exceed original background concentrations.

Highly treated groundwater typically does not pose a significant threat if the treatment system is designed and operated to remove substantially all waste constituents with a factor of safety before discharge. For organic compounds, treatment usually includes three in-series carbon vessels or ion exchange units, each capable of treating the entire waste stream. Removal of waste constituents to the method detection limit is preferred. Conditions for treated groundwater disposal are listed below.

a. The treatment system design shall be reviewed by Central Coast Water Board staff prior to discharge. The discharge shall have an approved cleanup workplan. .

b. The discharge location shall not be within 200-feet of a water supply well, or within 100 feet of a stream, body of water, or wetland, unless allowed by the Executive Officer.

c. With the report of waste discharge, the discharger shall submit data that completely characterize the nature of the waste constituents that might be discharged. Samples must be analyzed for waste constituents of concern

known to be present at the site and other constituents as specified by the Executive Officer.

d. Central Coast Water Board staff will notify any potentially affected water management agency prior to enrolling the discharge. The discharger shall provide local water management agency contact information to Central Coast Water Board staff.

e. The discharger shall comply with a monitoring and reporting program if one is issued by the Executive Officer.

6. Monitoring Well Development and Aquifer and Well Pumping Test Water

Well development activities that repair damage to the well formation caused by drilling, increases the porosity and permeability of the materials surrounding the well's intake zone. Aquifer and well pumping tests are used to determine the hydraulic characteristics (the ability to yield water) of an aquifer or well. These activities can produce high flows. Such flows could cause erosion if appropriate practices are not implemented. Well development clears fine-grained soils from the well and the formation surrounding the well's intake zone. The fine-grained soils could migrate to surface waters and cause siltation. If the aquifer being pumped has poorer water quality than the receiving groundwater, then either activity could potentially degrade receiving water quality. However, since well development and aquifer and well pumping tests are temporary in nature and involve a finite discharge volume, they may be considered low threat. Conditions for monitoring well development and aquifer and well pump test water disposal:

a. For wells in areas of known or suspected pollution or wells associated with groundwater cleanup projects, prior to discharge, the applicant shall submit data that completely characterize the nature of the waste constituents that might be discharged. Samples shall be analyzed for waste constituents of concern known to be present at the site and other constituents as specified by the Executive Officer.

b. The discharger shall implement appropriate management practices to dissipate energy and prevent erosion.

c. The discharger shall implement appropriate management practices to preclude discharge to surface waters and surface water drainage courses.

d. The discharge location shall not be within 100 feet of a stream, body of water, or wetland. The discharge location shall not be within 200 feet of a water supply well.

C. WAIVER OF REPORT OF WASTE DISCHARGE AND WASTE DISCHARGE REQUIREMENTS FOR LISTED SPECIFIC TYPES OF DISCHARGES

This Section C contains a list of the types of discharges for which Resolution No. R3-2008-0010 grants a waiver of the requirement to submit a report of waste discharge and the requirement to obtain waste discharge requirements. Discharges are automatically enrolled if the discharge complies with conditions specified in Attachment A, Section A and the listed conditions below. The discharger is not required to submit a report of waste discharge (i.e., application), pay a fee, or receive a Notice of Applicability or other notification from the Central Coast Water Board. [Waiver of California Water Code Sections 13260(a), 13260(b), 13263(a), and 13264(a)]. The enrollment requirement table is provided in Attachment B of the General Waiver.

1. Fire Sprinkler Water

Fire sprinklers in buildings are periodically pressure tested and drained to meet fire code requirements. Testing requires a short-duration pressurized discharge. The lines are drained approximately quarterly for maintenance. Typically, the pipe contents of whole buildings are drained, usually from 4-inch, 2-inch, and 1-inch pipes. The discharge may contain an oily sheen, and is often stagnant. Sometimes direct connection to a sanitary sewer is possible, and is the preferred method of disposal. However, in some areas, where plumbing code restrictions do not allow such discharges, or where no sanitary sewer system exists, fire sprinkler water may be discharged to land. Conditions for discharge of fire sprinkler water include:

a. The discharger shall implement appropriate management practices to dissipate energy and prevent erosion.

b. The discharge area shall not be within 100 feet of a stream, body of water, or wetland.

c. The discharge shall not flow directly to a surface water, storm drain, or storm water conveyance system.

2. Inert Wastes

California Code of Regulations, Title 27, Division 2 Solid Waste, Section 20230(a) defines inert waste as "that subset of solid waste that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives, and does not contain significant quantities of decomposable waste." For water quality purposes, a waste must be chemically and physically inert to be considered an inert waste. However, even the most inert of wastes can cause substantial water quality problems if disposed of improperly (e.g., solid concrete dumped directly into a creek

could lead to flow diversions and stream bank erosion). Conditions for inert wastes disposal include:

a. The discharger shall implement appropriate management practices to secure the disposal site and prevent unauthorized disposal by the public.

b. Inert waste shall be disposed of in a manner that reasonably maintains its chemical and physical stability.

c. The discharge area shall not be within 100 feet of a stream, body of water, or wetland, nor within streamside riparian corridors.

3. Residential Swimming Pool Water

Residential swimming pool water is occasionally drained for pool maintenance. In the Central Coast, private swimming pools are not frequently drained due to the high cost of water and low chance that weather conditions would cause pool water to freeze. Possible water quality issues associated with swimming pool discharges include erosion potential, high bromine or chlorine concentrations, and high or low pH. Conditions for swimming pool water disposal include:

a. The discharger shall implement appropriate management practices to dissipate energy and prevent erosion.

b. The discharge shall not have chlorine, bromine, or total dissolved solids concentrations that could impact groundwater quality.

c. The discharge shall have a pH between 6.5 and 8.3.

d. The discharge area shall not be within 200 feet of a water supply well, or within 100 feet of a stream, body of water, or wetland.

e. Discharge shall not flow to a surface water, storm drain, or storm water conveyance system.

4. Water Supply Discharges

Water supply discharges covered in this section include water discharges from supply pipelines and tanks, supply well pump testing, and supply well development. These discharges often have high flow rates; large production wells pump in the range of 1,000 gallons per minute. Erosion may result if best management practices are not implemented. Discharges from water supply pipelines and tanks may be chlorinated as a result of disinfection events. Aquifer and well pumping tests are used to determine the hydraulic characteristics (the ability to yield water) of an aquifer or well. Well development repairs damage to the well screen interval caused by drilling, and increases the porosity and permeability of the materials surrounding the

well's intake zone. Well development clears fine-grained soils from the well and the formation surrounding the well's intake zone. The fine-grained soils could migrate to surface waters and cause siltation. If the aquifer being pumped has water of lesser quality than the receiving groundwater, then either activity could potentially degrade receiving water quality. However, since these discharges are temporary in nature and involve a finite discharge volume, they may be considered low threat. Conditions for water supply discharges include:

a. The discharger shall implement appropriate management practices to dissipate energy and prevent erosion.

b. The discharger shall implement appropriate management practices to preclude discharge to surface waters and surface water drainage courses. The discharger shall immediately notify Central Coast Water Board staff of any discharge to surface waters or surface water drainage courses.

c. The discharge shall not have chlorine or bromine concentrations that could impact groundwater quality.

d. The discharge area shall not be within 100 feet of a stream, body of water, or wetland.

5. Water Supply Well Drilling Muds

This section applies to drilling muds from water supply well drilling, and specifically excludes muds from monitoring wells at cleanup sites and oil wells. Drilling muds consist of a clay slurry. Clay and water are added to the borehole to provide lubrication in the drilling process and to aid in the removal of material from the bore. The mud used typically does not contain appreciable levels of hazardous materials or soluble waste constituents. Typically, water supply well drilling activities occur in remote areas having less of a potential to affect water quality. The threat to water quality of such materials depends primarily on the additives used. Additives are selected based on soil conditions. Typically, bentonite is used in coarse soils (sands and gravels), polymers are used in fine soils (clays and shales), and surfactants are used in sticky clays. Often, two or more additives are used in combination. With bentonite providing a filter cake, and polymer providing inhibition, the mud usually achieves the properties required to drill successfully in most soil formations. If the slurry material to be spread is free of appreciable additives (additive quantities in conformance with industry standards, the used slurry may be spread on pastures or fields, provided that contact with surface water is avoided and runoff is prevented). Conditions for water supply well drilling mud disposal include:

a. The discharge shall be spread over an undisturbed, vegetated area capable of absorbing the top-hole water and filtering solids in the

discharge, and spread in a manner that prevents a direct discharge to surface waters.

b. The pH of the discharge shall be between 6.5 and 8.3.

c. The discharge shall not contain oil or grease.

d. The discharge area shall not be within 100 feet of a stream, body of water, or wetland, nor within streamside riparian corridors.

D. ADDITION OF MATERIALS FOR IN-SITU BIOREMEDIATION, CHEMICAL OXIDATION, CHEMICAL REDUCTION COMPOUNDS, OR TRACER TESTS

Section D contains a list of the types of discharges for which Resolution R3-2008-0010 grants a waiver of the requirement to submit a report of waste discharge and the requirement to obtain waste discharge requirements. Enrollment under Section D does not require a fee payment. However, in most cases Water Board staff oversight costs will be reimbursed through the cleanup cost recovery program. The requirement to submit a report of waste discharge is waived provided the discharger submits a cleanup workplan. [Waiver of California Water Code Section 13260(a), 13260 (b), 13263(a), and 13264(a)]. The enrollment requirement table is provided in Attachment B of the General Waiver. A discharge may be enrolled in this waiver if the discharge complies with specific conditions identified in this section as well as general conditions specified in Attachment A, Section A.

Petroleum hydrocarbon compounds, perchlorate, pesticides, metals, and/or chlorinated solvents have impaired soil and groundwater at various cleanup sites throughout the Central Coast Region and may cause adverse impacts to existing and potential beneficial uses. Injection of materials, including chemical oxidants, chemical reductants, nutrients, carbon sources, bacteria, or other substrates into the subsurface is an effective treatment technology used to reduce the levels of waste constituents in soil and/or groundwater at cleanup sites. For groundwater, the application of these materials can be done by adding them to extracted groundwater or injecting them directly into the treatment zone. The implementation of in-situ cleanup may require small-scale pilot testing or a demonstration study prior to the implementation of a full-scale remediation project. Discharges from a pilot test or demonstration study are also subject to General Wavier conditions.

Resolution No. 68-16 requires the Central Coast Water Board, in regulating waste discharges, to maintain high-quality waters of the State until it is demonstrated that any change in quality will be consistent with the 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 water quality objectives). Discharges of waste are required to meet requirements that result in

best practicable treatment or control of the discharge. The application of materials into the subsurface may cause temporal degradation of groundwater at sites subject to this waiver. The temporary degradation allowed by this waiver is consistent with Resolution No. 68-16 if (1) the purpose is to accelerate and enhance 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; (5) the discharge will not cause water quality objectives to be exceeded beyond the treatment zone; and (6) it is expected that increases in concentrations above water quality objectives caused by the treatment will be reduced over time.

1. Materials used for in-situ remediation purposes

The materials approved under this General Waiver for injection into the subsurface are listed under the following categories. Proprietary or non-proprietary substances which contain similar materials can be approved by the Executive Officer; the discharger shall provide a list of all the compounds contained in the injected material.

a. Oxidation/Aerobic Degradation Enhancement Compounds:
Oxygen, Fenton's reagent (hydrogen peroxide, ferrous iron catalyst, and pH buffer), hydrogen peroxide, potassium or sodium permanganate, sodium persulfate, oxygen releasing compound (ORC), magnesium peroxide, and ozone.[4]

b. Reducing/Reductive Degradation Enhancement Compounds:
Polysulfide, hydrogen releasing compound (HRC), polyacetate ester, and zero-valent iron.

c. Nutrients/Enhancements:
Ammonia, phosphate, bacteria for bioaugmentation purposes.

d. Carbon Sources/Electron Donors and Acceptors:
Acetate, lactate, propionate, oleate, glucose, sulfates, complex sugars such as molasses or corn syrup, other food process byproducts such as milk whey or yeast extract, emulsified oils, and other organic material such as wood chips or peat moss.

e. Study Tracer Compounds:
The tracer compounds must be highly contrast and should be non-reactive with the formation, formation water, waste constituents, and/or materials injected. The tracers may be dyes or chloride-based and bromide-based salts, such as calcium chloride, sodium chloride, calcium bromide, sodium

[4] See Guidance document "Technical and Regulatory Guidance for In-situ Chemical Oxidation of Contaminated Soil and Groundwater" Second Edition, January 2005, The Interstate Technology and Regulatory Council for chemical oxidant considerations.

bromide, potassium bromide, potassium, iodide, and similar materials as approved by the Executive Officer.

2. Cleanup Workplan Conditions

A discharger may seek coverage under this General Waiver for discharges to the subsurface for the cleanup of waste constituent impacted sites. Dischargers will use the injection methods at cleanup sites that are regulated by Central Coast Water Board staff. To be covered under this General Waiver, the discharger shall have a cleanup workplan approved by the Executive Officer and comply with a site-specific monitoring and reporting program. Enrollment in this General Waiver will subject the discharger to a public notification and comment, which will be achieved by noticing the cleanup workplan in a Central Coast Water Board meeting agenda.

The cleanup workplan shall include the following information (unless Central Coast Water Board staff agrees it is not applicable for the specific case).

a. Characterization and extent of waste constituent(s) of concern.

b. Site-specific geology (lithology and physical parameters), calculated groundwater flow velocity and direction, and complete definition of all preferential pathways and buried utilities.

c. Baseline (i.e., current water quality and site conditions) water quality data that include total dissolved solids, oxygen reduction potential, conductivity, dissolved oxygen, pH, temperature, major anions (sulfate, chloride, etc.) and major cations (sodium, magnesium, potassium), and any additional data that may be required based on the specific material introduced to the subsurface. This information will be used to establish baseline conditions. Additional monitoring during and after injection is also required as part of the monitoring and reporting program. The baseline water quality data may be submitted with the cleanup workplan, or later as an addendum. The data must be reviewed by Central Coast Water Board staff and the cleanup workplan/discharge approved by the Executive Officer prior to the initiation of the proposed discharge.

d. Baseline water quality data that include analysis of dissolved metals in groundwater when the injected material is an oxidizing or reducing compound. The primary metals of concern include arsenic, barium, cadmium, total chromium, hexavalent chromium, copper, iron, lead, and selenium. In addition, baseline soil analysis shall be performed for the primary metals of concern.

e. A proposed monitoring and reporting program to evaluate the effectiveness of the treatment system and to monitor any potential concerns during and post treatment. The monitoring and reporting program shall include monitoring for any possible unintended by-products (e.g., ketones, aldehydes, or biofouling of the well or formation).

f. Description of the application area including application rate(s), materials to be used, injection pressures, injection volume, and applied concentrations. And, the designed infiltration rate and/or radius of influence.

g. The cleanup workplan shall include specific impurities of applied material and the breakdown reactants and products. The cleanup workplan shall also include information regarding any potential adverse impacts to groundwater quality (e.g., development and mobilization of metals due to reduction/oxidation changes) and whether the impacts will be localized and short-term.

h. Results of any bench scale test performed for the proposed treatment technology.

i. Description and schematic of the treatment system, including a schematic of the area of application.

j. Material Safety Data Sheet information and other product information for any materials to be added to the subsurface.

k. Contingency and emergency plans for an unanticipated release or surface overflow of the injected material and possible byproducts. The contingency plan shall detail appropriate actions to be taken in order to protect human health and the environment. The contingency plan shall be maintained on site.

3. Discharge Conditions

In addition to Section A (General Waiver Conditions), the discharger shall comply with the conditions listed below for any proposed in-situ remediation.

a. The discharger shall submit the cleanup workplan and receive written approval from the Executive Officer prior to injection of material.

b. Outside the treatment zone, the waste discharged shall not cause the:

1) groundwater to contain residual taste or odor producing substances that cause nuisance or adversely affect beneficial uses.

2) concentrations of organic chemicals in excess of the limiting concentrations set forth in California Code of Regulations, Title 22, Chapter 15, Article 5.5, Section 64444.

3) concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Chapter 15, Article 4, Section 64431.

4) creation of a pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code.

5) groundwater to exceed the Basin Plan's Attachment A Table 3-8 water quality objectives for selected sub-basins. Where sufficient background groundwater quality data is present, the Central Coast Central Coast Board may consider project specific requirements.

c. The rate and volume of materials injected shall not cause undesirable migration of materials or waste constituents. Nor shall the materials or by-products produced impact surface waters.

d. The discharge of any material other than the material(s) identified and concurred with in the cleanup workplan is prohibited.

e. The discharge of a material to land that is not under the control of the discharger is prohibited, unless written consent is obtained from the land owner.

f. The discharge of materials that create fugitive emissions in excess of federal, state, and/or local air quality standards is prohibited. The discharge of materials that create fugitive air emissions producing indoor air vapor intrusions threatening human health and the environment is prohibited.

g. Central Coast Water Board staff will notify any potentially affected water management agency prior to enrolling the discharge. The discharger must provide local water management agency contact information to Central Coast Water Board staff.

h. The discharger shall submit a written request (i.e., workplan addendum or field modification report) to the Executive Officer if changes to the approved workplan are proposed. The discharger shall receive approval from the Executive Officer prior to implementing the requested change.

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

a. breakdown of any facility or control system or monitoring equipment installed by the discharger to achieve compliance with the Waiver;

b. migration or application of materials, pollutants or byproducts outside the specified treatment area;

c. accidents caused by human error or negligence; or

d. other causes such as acts of nature;

the discharger must notify the Central Coast Water Board by telephone within 24-hours after he/she or his/her representatives have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written notification must include pertinent information explaining reasons for

the noncompliance and must indicate the steps taken to correct the problem and the dates thereof, and the steps being taken to prevent the problem from recurring. The discharger must also provide photo documentation, if applicable. The reporting of migration or application of materials, waste constituents or byproducts outside the specified treatment area must include an assessment of, and schedule for, implementation of the contingency plans.

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