

**STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

**STAFF REPORT FOR REGULAR MEETING OF DECEMBER 1, 2006**

Prepared on October 25, 2006

**ITEM NUMBER:** 12

**FACT SHEET**

**SUBJECT:** National Pollutant Discharge Elimination System Permit for Discharges of Highly Treated Groundwater to Surface Waters, Order No. R3-2006-0067, NPDES No. CAG993002

**KEY INFORMATION:**

**Location:** This permit applies to locations throughout the Central Coast Region

**Type of Waste:** This permit applies to discharges of highly treated groundwater resulting from cleanup at leak and spill sites with no likely adverse effect on water quality, including, but not limited to:

- Cleanup of petroleum or other chemicals from underground storage tanks, or other sources of pollution;
- Aquifer pumping tests;
- Dual-phase extraction, or other remedial pilot tests; and
- Excavation dewatering for the removal and installation of underground storage tanks, or during the excavation of contaminated soils.

**This Action:** Approval of reissued General Permit for Discharges of Highly Treated Groundwater to Surface Waters

**BACKGROUND**

In 1972, the Federal Water Pollution Control Act (Clean Water Act [CWA]) was amended to prohibit the discharge of pollutants to waters of the United States from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The federal regulations allow authorized states to issue general NPDES permits or individual NPDES permits to regulate discharges of pollutants to waters of the United States.

The September 22, 1989, Memorandum of Agreement between the U.S. Environmental Protection Agency (hereinafter "US EPA") and the State Water Resources Control Board (hereinafter "State Water Board") authorized and established procedures for the State Water Board to issue general NPDES permits pursuant to CFR 122.28 and 122.44.

On October 18, 1996, the Central Coast Regional Water Quality Control Board (hereinafter "Central Coast Water Board") adopted Order No. 96-4 (NPDES No.

CAG993001) allowing discharges of low threat to water quality. On December 7, 2001, the Central Coast Water Board adopted Order No. 01-134 (NPDES No. CAG993002) for discharges of highly treated groundwater to surface waters, which was a reissuance of Order No. 96-4. The Central Coast Water Board adopted the 2006 reissued General NPDES Permit for Discharges of Highly Treated Groundwater to Surface Waters (hereafter "General Permit") on December 1, 2006.

## DISCUSSION

The purpose of the General Permit is to facilitate permitting of discharges that the Central Coast Water Board determines to be of low threat in a timely and cost-effective manner. The General Permit can be used in concert with the Central Coast Water Board's general waiver policy for regulating low threat discharges to land; this permit does not eliminate the general waiver, but provides an option for regulation of discharges to surface waters.

It is illegal to discharge waste to waters of the United States without an NPDES permit, whether or not a discharge is eligible for coverage under the General Permit. Facilities with discharges listed in the section, "Types of Discharges Covered by this General Permit" not obtaining coverage under this or another general NPDES permit or under an individual NPDES permit for discharge to surface waters will be in violation of the CWA and the California Water Code.

To be considered for enrollment under the General Permit, extracted groundwater at leak and spill sites must be highly treated prior to discharge. Groundwater treatment is generally performed using double-redundant treatment units and commonly involves conventional granular activated carbon (GAC) filtration systems. GAC units typically consist of three carbon vessels in series. Each carbon vessel is designed and sized to treat the worst case influent contaminant design loading for the sampling period and is

required to ensure that the system poses no significant threat to water quality and protects beneficial uses of the receiving water.

To obtain authorization under the General Permit for discharge to waters of the United States, all proposed new dischargers in categories covered by the General Permit must submit an application as defined in Section A of the General Permit. Current discharges of highly treated groundwater under General Permit No. 01-134 will be automatically enrolled in the General Permit.

## Criteria for Enrollment under this General Permit

The General Permit covers all new or existing discharges of highly treated groundwater to surface waters. To be covered by the General Permit, discharges must meet the following criteria:

1. Pollutant concentrations in the discharge do not (a) cause, or (b) contribute to an excursion above any applicable water quality objectives, including prohibitions of discharge. Pollutant discharges that have a reasonable potential to cause or contribute to an excursion above any water quality objective must meet applicable Effluent Limits.
2. The discharge does not include water added for the purpose of diluting pollutant concentrations.
3. Pollutant concentrations in the discharge will not cause or contribute to degradation of water quality or impair beneficial uses of receiving waters.

## Types of Discharges Covered by this General Permit

Below is a list of discharges potentially meeting the above stated criteria. This is not a complete list of discharges eligible for consideration of coverage under the General Permit. Other proposed discharges may be submitted to the Central Coast Water Board for consideration of coverage. Also, local

governmental agencies may require controls or management measures for discharges occurring within their jurisdiction in addition to or more stringent than the controls specified in this General Permit.

1. **Highly treated groundwater:** Discharge of highly treated groundwater extracted and treated for the purpose of cleaning up groundwater degraded by leaks of petroleum or other chemicals from underground and aboveground storage tank systems, pipelines, tanker trucks, rail cars, drums, manufacturing facilities, or any other sources of pollution.
2. **Aquifer test water:** Discharge of highly treated groundwater extracted and treated for the purpose of conducting aquifer pumping tests to evaluate remedial alternatives at cleanup sites.
3. **Dual-phase extraction test water:** Discharge of highly treated groundwater extracted and treated for the purpose of conducting dual-phase (vapor and water), extraction pilot tests, or other approved groundwater treatment system pilot test to evaluate remedial alternatives.
4. **Excavation dewatering:** Discharge of highly treated groundwater generated during removal and installation of underground storage tanks and during the excavation of contaminated soils.

The extracted groundwater may be treated and discharged on either continuous or batch bases.

#### **Types of Discharges *Not* Covered by this General Permit**

Discharges that may be a significant threat to water quality and which are therefore excluded from coverage under this General Permit include (1) discharges from domestic wastewater treatment facilities; (2) discharges from secondary containment structures; (3) discharges exhibiting acute or chronic toxicity, containing chemical or organic constituents

above water quality objectives or having a temperature adversely impacting beneficial uses; and (4) discharges that are regulated under another general or individual NPDES permit.

#### **Discharges Currently Enrolled Under the Existing General Permit**

To date, the Central Coast Water Board has authorized approximately 35 discharges under the General Permit and approximately 20 highly treated groundwater dischargers are still actively enrolled. Many of these authorized dischargers will wish to continue their coverage under the General Permit. Unless they submit notices of termination or staff notifies authorized dischargers that they no longer qualify for General Permit coverage, they will automatically be reenrolled in the reissued permit and must comply with any new (i.e., more stringent) provisions. We receive approximately three new applications for coverage under the General Permit each year. Streamlining the permitting process through renewal of this General Permit will result in the appropriate regulation of many discharges of highly treated groundwater to surface waters in the Central Coast Region.

#### **State Implementation Policy (SIP)**

On March 2, 2000, the State Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The State Water Board revised the SIP in 2005. The SIP establishes procedures to implement National Toxics Rule (NTR) and California Toxics Rule (CTR) water quality criteria as well as water quality objectives contained in the Basin Plan. The SIP also establishes procedures for selecting priority pollutants requiring water quality-based effluent limitations and for calculating the limits. NTR and CTR requirements only apply to inland surface waters and enclosed bays and estuaries discharges, not ocean discharges.

*General Permit Applicants*

In compliance with the SIP, applicants applying for coverage under this General Permit are required to sample representative influent (i.e., groundwater) for the priority pollutants listed in Attachment D of the General Permit. Attachment D lists the priority pollutants, their corresponding effluent limits, minimum reporting levels, and acceptable analytical methods. If the applicant detects a priority pollutant at a concentration greater than the effluent limit, the applicant must treat extracted groundwater to below the effluent limit listed in Attachment D. This treatment would be in addition to the treatment for the chemicals of concern at the leak or spill site. The applicant would also be required to monitor the effluent for the exceeded priority pollutant(s) in accordance with the monitoring program established for the specific leak or spill site. Alternatively, the applicant may apply for an individual NPDES permit.

#### *Current Dischargers*

In compliance with the SIP, current dischargers enrolled in General Permit No. 01-134 are also required to sample treatment system influent for the priority pollutants listed in Attachment D. If the Discharger detects a priority pollutant in the influent at a concentration greater than the effluent limit in Attachment D, the Discharger must immediately sample the effluent for the priority pollutant(s) detected above the effluent limit(s). The Discharger shall compare influent and effluent samples to determine if the treatment system is effectively removing the priority pollutant(s) below the effluent limit(s). The Discharger may redesign the treatment system to reduce all priority pollutant concentrations to below the effluent limit(s). Alternatively, the Discharger may choose to submit an NOT to terminate coverage under the General Permit and/or submit an application for an individual NPDES permit.

If the Discharger does not detect a priority pollutant above the reporting limit, no more sampling is required. If the Discharger detects a priority pollutant above the reporting limit, but below the water quality criteria, the

Discharger will be required to sample for that constituent quarterly.

#### **Ocean Plan**

Applicants proposing to discharge to the ocean must test the influent (i.e., groundwater) for the constituents listed in Table B of the Ocean Plan. The discharge shall not exceed the concentrations set forth in water quality objectives listed in the Ocean Plan Table B. To date, no ocean discharges have been enrolled under the existing Permit.

#### **MONITORING AND REPORTING**

Monitoring and Reporting Program (MRP) No. R3-2006-0067 is part of the General Permit. This general MRP No. R3-2006-0067 requires the Discharger to conduct routine effluent and receiving water monitoring to verify compliance with the General Permit and protection of water quality. Upon enrollment of each discharge under the General Permit, Central Coast Water Board staff will modify MRP No. R3-2006-0067 to accurately require the Discharger to monitor the effect of that discharge. For example, if the discharge results from cleanup of groundwater at a leaking underground storage tank facility, the modified MRP No. R3-2006-0067 will require the Discharger to monitor petroleum hydrocarbons and associated gasoline constituents. If the discharge results from groundwater cleanup at a different type of facility, the modified MRP No. R3-2006-0067 will require the Discharger to monitor compounds related to the release from that facility. In addition, if any priority pollutant in the treatment system influent exceeds the effluent limit as listed in Attachment D, the Discharger shall analyze the effluent for each exceeded priority pollutant in accordance with the monitoring and reporting program established for that specific site. The Executive Officer can modify MRP No. R3-2006-0067 to include a change in monitoring frequency or a change in constituents requiring monitoring.

## ENROLLMENT PROCESS

### Application Requirements

To obtain coverage under the General Permit, an applicant must submit a Notice of Intent to Comply (NOI) form and an appropriate annual fee. Signing the certification on the NOI signifies the applicant intends to comply with the General Permit provisions. Applicants who submit an NOI are not required to submit an individual NPDES permit application.

As specified in Section A.1 of the General Permit, the applicant must also submit: (1) analyses of influent chemicals of concern, metals, and other organic or inorganic constituents possibly present in the influent; (2) priority pollutant analyses (Attachment D) or Ocean Plan constituents; (3) receiving surface water analyses; (4) a map showing wells, discharge location and flow path to receiving waters, and treatment system schematic; (5) information for the public participation fact sheet including mailing addresses of neighbors; and (6) authorization to discharge to or from another property or storm drain conveyance system (if applicable). Central Coast Water Board staff will determine if additional information is required.

Facilities proposing new discharges must submit an NOI and first annual fee at least 60 days prior to the planned commencement of discharge and allow a 30-day public review period.

### Central Coast Water Board Staff Response to NOI

The Central Coast Water Board Executive Officer may issue the applicant a letter (1) indicating the discharge is excluded from coverage under the General Permit, (2) requesting the applicant submit an application for an individual permit, (3) requesting the applicant apply for a different general NPDES permit from the Central Coast Water Board, (4) indicating that the NOI is complete, or (5) requesting additional information to complete the NOI.

Once the NOI is complete, and if the proposed discharge meets the General Permit enrollment criteria, Central Coast Water Board staff will mail the public fact sheet including the Central Coast Water Board's intent to enroll the discharge under the General Permit to neighbors within at least a 300-foot radius from the discharge. Neighbors and interested parties are allowed a 30-day comment period. If there is no significant objection from the public, the Executive Officer may authorize, in writing, the enrollment of the discharge under the General Permit. If Central Coast Water Board staff receives significant public comment, then staff may take the item to the next available Central Coast Water Board meeting for Board direction or provide an alternative opportunity for a public hearing, such as a staff work shop.

### Central Coast Water Board Notification

All discharges authorized for enrollment under the General Permit are described in the *Low Threat Cases* section of each Central Coast Water Board meeting's agenda for Central Coast Water Board review. Through this public review process, the Central Coast Water Board may determine that a discharge is not suitable for enrollment and is more appropriately regulated under an individual NPDES permit, another general NPDES permit, or waste discharge requirements.

### General Permit Termination

Authorization to discharge under the General Permit shall be terminated upon receipt of a Notice of Termination (NOT), adoption of an individual permit or a different general NPDES permit, or upon written notice of termination from the Executive Officer.

The General Permit will expire on December 1, 2011. Those permittees authorized to discharge under the General Permit at the time of expiration will automatically be re-enrolled under the reissued General Permit, unless the

discharger submits an NOT to terminate coverage.

### **GENERAL PERMIT CHANGES**

Major changes made to the December 7, 2001 General Permit and MRP No. 01-135 are described below.

### **Examples of Low-Threat Discharges**

The flow guidelines from the "Examples of Discharges of Highly Treated Groundwater to Surface Waters" Section are located in the "Findings" section rather than the "Application Requirement" section. Consequently, the flow values are guidelines rather than requirements.

### **Ocean Discharges**

Staff added a "Water Quality Control Plan, Ocean Waters of California-California Ocean Plan" (Ocean Plan) findings to allow for ocean discharges. Applicants proposing an ocean discharge will be required to analyze the influent for constituents listed in the Ocean Plan Table B. In addition, staff included a discharge prohibition to prohibit discharges into an Area of Special Biological Significance unless the Discharger obtains an exception under the Ocean Plan and otherwise complies with all applicable Ocean Plan requirements.

### **State Implementation Policy**

The General Permit now contains requirements for current dischargers and new applicants, proposing to discharge to inland surface waters and enclosed bays and estuaries, to sample for priority pollutants to comply with the NTR, CTR, and State Implementation Policy (as described above in the "State Implementation Policy" section).

### **The Clean Water Enforcement and Pollution Prevention Act of 1999**

If a discharge exceeds effluent limits, mandatory minimum penalties may apply. An effluent limit may be expressed in numeric or

narrative form, and may be expressed as a prohibition against a discharge of a certain quantity, rate, or concentration of effluent from the discharge location. Section 13385(h) requires the Central Coast Water Board assess a mandatory penalty of \$3,000 for each "serious violation." A "serious violation" is any discharge of a Group II constituent that exceeds the effluent limitation by 20 percent or a Group I constituent that exceeds the effluent limitation by 40 percent (see State Water Board's Water Quality Enforcement Policy Appendix B). Any chronic violation will be penalized according to section 13385(i). Failure to provide certain reports are subject to mandatory penalties under Section 13385.1.

### **Annual Fee Clarification**

Due to recurring fee modifications by the State Water Board, the stated application fee dollar amount is no longer included in the General Permit. Applicants should contact the Central Coast Water Board staff for the current application fee.

### **Application Requirements: Representative Treatment System Influent Monitoring**

If the applicant or Central Coast Water Board staff knows or suspects inorganic constituents to be present in the influent, the applicant shall sample for inorganic constituents and submit the results during the application process [as specified in Section A.1.b(1) of the General Permit]. The General Permit previously required the discharger to submit a representative influent sample of organic constituents, metals, pH, nitrate, and total dissolved solids. The initial influent sampling requirements are now more comprehensive.

### **Application Requirements: Background Analyses of the Receiving Water Body**

The previous General Permit did not require dischargers to perform receiving water sampling and analyses prior to discharge. The General Permit now requires the

discharger to conduct background receiving surface water monitoring near the proposed discharge location. Central Coast Water Board staff will require these data to determine (at a later time) if the discharge complies with the receiving water limitations. The additional sampling is outlined in Section A.1.b(4) of the General Permit. New enrollees must submit pH, temperature, color, turbidity, dissolved oxygen, total suspended solids, and total dissolved solids analytical results along with their NOI. Current enrollees must submit these data after reenrollment.

### **Application Requirements: Public Participation**

The previous General Permit (Order No. 01-134) did not contain requirements for public participation. However, the December 2001 Fact Sheet required that the applicants submit nearby property owner contact information. General Permit Section "Application Requirements" now requires the applicant to submit nearby property owner information and information for a public fact sheet.

### **Notice of Termination**

The General Permit now explicitly allows the Executive Officer to terminate General Permit enrollment if the discharger violates the permit or makes any substantial changes to the treatment system.

### **Discharge Prohibitions**

The General Permit now includes a discharge prohibition in Section B.7. to ensure the discharge does not cause erosion at the discharge point.

In addition, the General Permit now includes the State Water Board's Anti-Degradation Policy as a "Discharge Prohibition." A discharge regulated under the General Permit shall not degrade receiving water quality. Central Coast Water Board staff expects the Discharger to design and operate the

treatment system to treat extracted groundwater to non-detectable levels.

### **Effluent Limitations**

The General Permit does not include a chlorine effluent limitation. Chlorine is not used in conventional groundwater treatment and is not expected to occur naturally in groundwater.

Effluent limitations for petroleum hydro-carbon constituents and volatile organic compounds are contained in the General Permit. These effluent limits are applicable to most discharges that enroll in the General Permit. Effluent limits for exceeded priority pollutants are included in General Permit, Attachment D or the Ocean Plan, Table B (as applicable). The effluent limits included in Attachment D are the most stringent applicable water quality criteria contained in the Basin Plan, the NTR, the CTR, and other applicable regulatory limits. The discharger is required to sample the effluent for priority pollutants monthly. The priority pollutant effluent limits in Attachment D are daily maximum limits. Because these are set at the levels that would otherwise be required for monthly average limits to ensure that enrolled discharges are appropriate for coverage under a general permit, only daily maximum limits are included.

Constituents not included in Section C "Effluent Limitations" will be regulated pursuant to Section B.3, "Discharge containing concentrations of pollutants in excess of applicable water quality objectives is prohibited." Central Coast Water Board staff will add monitoring requirements for these constituents to a modified MRP No. R3-2006-0067 and include applicable water quality objectives in the enrollment letter to the Discharger.

### **Standard Provisions and Reporting Requirements**

The General Permit requires the discharger to comply with the Central Coast Water Board's "Standard Provisions and Reporting Requirements for National Pollutant

Discharge Elimination System Permits" with the exception of section A.16. Standard provision A.16 requires the discharger to submit annual reports on January 30 of each year. The discharger shall comply with the monitoring requirements as specified in the MRP No. R3-2006-0067, which typically includes quarterly reporting.

### **Monitoring and Reporting**

MRP No. R3-2006-0067 is now more useful, clear, and inclusive by including the following sections: Sampling and Analytical Methods, Definition of Terms, Specifications for Sampling and Analyses, and Description of Sampling Stations. Central Coast Water Board staff updated MRP No. R3-2006-0067 to reflect changes made to this General Permit.

MRP No. R3-2006-0067 no longer includes a "Discharge Prohibition" section listing numeric water quality objectives. The General Permit now contains the applicable numeric effluent limitations.

### **RESPONSE TO COMMENTS**

A draft of this proposed reissued General Permit was sent to the current enrollees, county agencies, and other interested parties with a Notice of Public Hearing. Central Coast Water Board staff received comments and questions from Arcadis G&M, Inc. in a letter dated October 6, 2006. Staff's responses are contained in a letter dated November 9, 2006, which is attached to this Fact Sheet. Staff revised six Appendix D effluent limits previously based on National Toxics Rule (NTR) criteria: arsenic, cadmium, chromium (VI), copper, mercury, and zinc. Staff based these values on inapplicable NTR standards and now has corrected them to refer to the most stringent applicable CTR criteria. Staff also clarified Appendix D to indicate the effluent limits were daily maximums.

Staff did not receive any other comments.

### **ATTACHMENTS:**

1. November 9, 2006 letter to Arcadis G&M, Inc.
2. NPDES Permit No. R3-2006-0067
  - A. Monitoring and Reporting Program No. R3-2006-0067
  - B. Notice of Intent
  - C. Notice of Termination
  - D. Priority Toxic Pollutants table
  - E. Standard Provisions and Reporting Requirements

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