

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2003-0023

WASTE DISCHARGE REQUIREMENTS

FOR
BOB AND KATHY ELLINGHOUSE AND COOL VILLAGE, LLC.
COOL VILLAGE WASTEWATER TREATMENT FACILITY
EL DORADO COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Board) finds that:

1. On 18 December 2002, Bob and Kathy Ellinghouse (Discharger) submitted a Report of Waste Discharge (RWD) for a new wastewater treatment and disposal system (WWTF) that will treat and dispose of domestic wastewater generated from the Cool Village development in El Dorado County.
2. Cool Village is the location of a proposed shopping center. The shopping center will consist of a grocery store, a restaurant, retail shops, and office space. The proposed wastewater treatment and disposal system consists of grease traps, septic tanks, additional treatment (Orenco Advan Tex treatment system or similar system), disinfection, and leachfields. The proposed shopping center will be located on proposed Parcels 2 through 5; the leachfield and replacement area will be located within Parcel 8, as shown on Attachment C, which is attached hereto and made part of this Order by reference.
3. For the purposes of this Order, the WWTF shall mean the grease traps, septic tanks, additional treatment system, disinfection, effluent conveyance lines (commencing at the disinfection effluent outlet) and leachfields.
4. Cool Village is at the southeast corner of the intersection of State Highway 49 and State Highway 193 in the town of Cool, in portions of Sections 18 and 19, T12N, R9E MDB&M. The WWTF (Assessors Parcel Number 071-032-38) is shown on Attachment A, which is attached hereto and made part of this Order by reference.

Proposed Facility

5. Each business within the Cool Village shopping center will have its own grease trap and individual septic tank. Each septic tank will be sized to contain at least the maximum daily projected wastewater flow from each business. Wastewater flows are based on fixture units within each business. Projected flows for each business are presented below:

<u>Parcel #</u>	<u>Projected flows (gpd)</u>	<u>Septic tank size (gallons)</u>
2	800	1,500
3	2,275	3,000
4	1,550	2,500
5	1,275	2,250

6. Domestic wastewater generated from each business will flow through a grease trap prior to entering a septic tank. Each septic tank consists of a two-chamber concrete tank. The first chamber is utilized for solids removal and storage. An overflow baffle connects the first and second chambers and buffers peak hydraulic loads to the system. The secondary compartment is fitted with an biotube effluent filter.
7. Septic tank effluent will flow via gravity to an Orenco Advan Tex treatment system (or similar type of system). The Advan Tex treatment system is a multiple pass, packed bed aerobic wastewater treatment system. The treatment system has two compartments in its processing tank. The first compartment separates wastewater into three distinct zones: a scum layer, a sludge layer, and a clear layer. A flow-through port in the tank's baffle wall allows effluent from the clear layer to flow into the second compartment of the tank. A Biotube pump package in the second compartment pumps filtered effluent to a distribution manifold in the Advan Tex Filter. Effluent percolates down through a textile media and is collected in the bottom of a filter pod. The treated effluent flows out of the filter pod through the Filtrate Return Line that returns the treated effluent to the Recirculating Splitter Valve (RSV). The RSV automatically splits or diverts the flow between the Processing Tank and the final discharge.
8. The RWD states that the Advan Tex treatment system can treat domestic wastewater to secondary standards, and that influent wastewater quality will be representative of typical wastewater, with a Biological Oxygen Demand (BOD) and total suspended solids (TSS) of 250 mg/L and 250 mg/L, respectively. The RWD states that the grease traps will remove the grease and oil and that the septic tanks will exhibit removals similar to primary clarifiers. Assuming removals rates of 35% for BOD and 60% for TSS, the septic tank effluent is anticipated to be 160 mg/L for BOD and 100 mg/l for TSS. Information presented in the RWD shows that the additional treatment system will reduce BOD and TSS to concentrations less than 10 mg/L.
9. Effluent from the treatment system will flow via gravity to a disinfection system. Once effluent is disinfected to secondary standards, it will be discharged to a leachfield for disposal, as shown on Attachments B, C, and D, which is attached hereto and made part of this Order by reference.
10. Wastewater disposal will be accomplished via a shallow leachfield system, using a pressure dose process. Disposal will primarily be accomplished through evapotranspiration of native grasses growing over the leachlines during the dry periods, with percolation taking place during cold and wet periods. The pressure dose system consists of a dosing tank with a low lift pump or siphon and disposal lines with slotted pipe.
11. The design of the leachfield is based on a 74.6 minutes per inch percolation rate and flow of 6,000 gallons per day. The leachlines will be in a 3 foot by 3 foot trench with a one foot cover. The total length of the leachlines is approximately 1,700 feet. Infiltrators will be used in lieu of drainage rock. The wastewater application rate is approximately 0.58 gallons per day per square foot of disposal trench. Wastewater disposal to the leachfield will primarily occur over a 12 hour period during the day. The leachlines will be placed on Parcel 5, while Parcel 4 will be used, if needed, for a leachline replacement area. A schematic of the community leachfields is shown on Attachment B, which is attached hereto and made part of this Order by reference.

12. To minimize soil saturation within the leachfield during the wet season, a cut off drain will be installed above the leachfield to divert subsurface drainage around the leachfield. The depth of the cut off drain will be approximately 8 to 9 feet. Geotextile fabric will be placed on the upgradient side of the wall, while solid plastic will be placed on the downgradient side. Three quarter to one and one half inch drain rock will be placed in the trench. A four inch perforated drain pipe will be placed in the bottom of the trench to allow subsurface drainage to flow around the leachfield. The cut off drain is part of the WWTF and needs to be maintained in order to ensure the long term performance of the leachfield.
13. Monitoring of the wastewater depth in the disposal trenches can aid in early detection of leachfield failure. The Discharger will install observation wells in the disposal trenches for this purpose. In addition, the Discharger has stated that it will install groundwater monitoring wells to ensure that the discharge complies with State Board Resolution No. 68-16.
14. The design flow for the WWTF is approximately 6,000 gallons per day.
15. Bob and Kathy Ellinghouse currently own all the parcels, are developing the center, and are responsible for constructing the WWTF in accordance with this Order. The Discharger states that it will form a “merchant and owner association” to oversee and finance the continued operation of the WWTF, or that El Dorado County may be asked to take over operation, maintenance, and monitoring of the WWTF. However, neither action has yet been taken, and it is imperative that this Order not allow a WWTF to discharge without permanent financing and oversight to ensure its continued operation and maintenance. Therefore, this Order contains a prohibition that the WWTF may not begin operation until the Executive Officer has approved documentation that either (a) a public entity has accepted the ownership and operation of the WWTF or (b) a private entity has been created with adequate long-term financial resources and expertise to operate and maintain the WWTF in compliance with this Order.

Sanitary Sewer System

16. A “sanitary sewer overflow” is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the wastewater treatment plant (in this case, the dosing tanks). Temporary storage and conveyance facilities (such as wet wells, regulated impoundments, tanks, highlines, etc.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage/conveyance facilities.
17. Within this system, a sanitary sewer overflow consists of domestic and commercial sewage. The chief causes of sanitary sewer overflows include grease blockages, root blockages, debris blockages, sewer line flood damage, air relief/vacuum valve failures, vandalism, pump station mechanical failures, power outages, storm or groundwater inflow/infiltration, lack of capacity, and contractor caused blockages.
18. Sanitary sewer overflows often contain high levels of suspended solids, pathogenic organisms, toxic wastes, nutrients, oxygen demanding organic compounds, oil and grease, and other wastes.

Sanitary sewer overflows can cause temporary exceedences of applicable water quality objectives, pose a threat to public health, adversely affect aquatic life, and impair the public recreational use and aesthetic enjoyment of surface waters in the area.

Site-Specific Conditions

19. The average annual rainfall at the site is approximately 40 inches per year.
20. The topography of the site is characterized by slightly undulating hills with slopes ranging from 5 to 15 percent in a southeasterly direction. Knickerbocker Creek, a perennial creek, flows along the eastern boundary of the property.
21. On-site soils consist of brown to light brown rocky silty clay varying from 14 to 36 inches deep which overlay weathered and fractured serpentine.
22. In June 1995, a number of observation pits were excavated and percolation rate testing was conducted to determine whether the proposed disposal area was suitable for a leachfield disposal system. Groundwater was observed at a minimum of eight feet below ground surface in some of the observation pits. Results of percolation testing indicate that the average percolation rate was approximately 79 minutes per inch.
23. All portions of the WWTF are outside the 100-year flood zone.
24. The facility lies within the Coloma Hydrologic Unit Area No. 514.32, as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.

Groundwater Degradation

25. State Water Resources Control Board (SWRCB) Resolution No. 68-16 (hereafter Resolution 68-16 or the "Antidegradation Policy") requires the Regional Board in regulating the discharge of waste to maintain high quality waters of the state (i.e., background water quality) 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 beneficial uses, and will not result in water quality less than that described in the Regional Board's policies (e.g., quality that exceeds water quality objectives).
26. The Regional Board finds that the Discharger has not demonstrated that it is to the maximum benefit to the people of the State of California to degrade groundwater, and therefore groundwater degradation is not allowed under this Order.
27. This wastewater treatment facility provides treatment and control of the discharge that includes advanced treatment, disinfection, disposal to the leachfield using a pressure dose system, and evapotranspiration and percolation as disposal methods.
28. A standard septic tank and leachfield system provides minimal treatment of wastewater and is

highly dependent upon proper management and waste constituent attenuation in the disposal field to prevent pollution of groundwater and to protect beneficial uses. While the Basin Plan conditionally allows septic tanks with leachfield systems for rural development, it includes the expectation of optimal site selection and conservative design which meet the minimum guidelines, and attentive and judicious operation and maintenance. This leachfield area fails to meet Basin Plan criteria for depth of soil below leaching trenches. Therefore, this Order requires the Discharger to provide a responsible entity, and advanced treatment and disinfection to prevent pollution, nuisance, or contamination; and appropriately operate and maintain the system.

Basin Plan, Beneficial Uses, and Regulatory Considerations

29. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, 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. Pursuant to Section 13263(a) of the California Water Code, waste discharge requirements must implement the Basin Plan.
30. Surface water drainage is to Knickerbocker Creek, a tributary to the North Fork of the American River.
31. The beneficial uses of North Fork of the American River are municipal and domestic supply; agricultural irrigation; contact, canoeing and rafting, and other noncontact recreation; warm and cold freshwater habitat; cold water spawning; and wildlife habitat.
32. The beneficial uses of the underlying groundwater are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
33. The State Water Resources Control Board adopted Order No. 97-03-DWQ (General Permit No. CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. The wastewater treatment plant facilities will be underground and therefore not exposed to stormwater runoff. Because there is no storm water discharge, the Discharger is not required to obtain coverage under General Permit No. CAS000001.
34. On 12 August 1997, in accordance with the California Environmental Quality Act (CCR, Title 14, Section 15261 et. seq.), the El Dorado County adopted Resolution No. 191-97, certifying a final Environmental Impact Report for Phase I of the Cool Village project, including the leachfield disposal system.
35. On 18 September 1997, the El Dorado County Taxpayers for Quality Growth filed a lawsuit against El Dorado County and Cool Investments, LLC, petitioning for a writ of mandate determining the Final EIR to be inadequate under CEQA.
36. On 17 November 1998, the El Dorado County Taxpayers for Quality Growth, and El Dorado County and Cool Investments, LLC stipulated an agreement in court to resolve the lawsuit. The

settlement agreement constitutes final approval of a Final Development Plan for only Phase I of the project and constitutes mere conceptual approval for Phases II through IV of the project. These WDRs only pertain to Phase I of the project. If the Discharger wishes to continue development at the property, it must submit a complete RWD and CEQA documentation prior to constructing any additional wastewater system or modifying the system allowed under this Order.

37. The project, as approved by the El Dorado County Department of Community Development, Planning Division, may degrade water quality, possibly to the degree that water quality objectives will be violated, beneficial uses impacted, and pollution, contamination, or nuisance created. However, Discharge Specification B.8, Effluent Limitation C, Groundwater Limitation E, and Provisions F.1, F.4, F.7, and F.9, among others, mitigate or avoid pollution, nuisance, contamination, exceedance of water quality objectives, and impacts on beneficial uses.
38. Section 13267(b) of 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 waste 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 waters 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 report and the benefits to be obtained from the reports. In requiring those 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 No. R5-2003-0023” are necessary to assure compliance with these waste discharge requirements. The Discharger operates facilities that discharge waste subject to this Order.

39. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to CWC Section 13801, apply to all monitoring wells.
40. State regulations that prescribe procedures for detecting and characterizing the impact of waste constituents from waste management units on groundwater are found in Title 27. While the wastewater treatment facility is exempt from Title 27, the data analysis methods of Title 27 may be appropriate for determining whether the discharge complies with the terms for protection of groundwater specified in this Order.
41. The discharge authorized herein and the treatment and storage facilities associated with the discharge, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), Section 20005 et seq. (hereafter

Title 27). The exemption, pursuant to Title 27 CCR Section 20090(a), is based on the following:

- a. The waste consists primarily of domestic sewage and treated effluent;
- b. The waste discharge requirements are consistent with water quality objectives; and
- c. The treatment and storage facilities described herein are associated with a domestic wastewater treatment facility.

42. Pursuant to California Water Code Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

Public Notice

43. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.

44. The Discharger and interested agencies and persons were notified of the intent to prescribe waste discharge requirements for this discharge, and provided an opportunity to submit written views and recommendations and to be heard in a public meeting.

45. In a public meeting, all comments pertaining to the discharge were heard and considered.

IT IS HEREBY ORDERED that pursuant to Sections 13263 and 13267 of the California Water Code, Bob and Kathy Ellinghouse and Cool Village LLC, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder, shall comply with the following:

[Note: Other prohibitions, conditions, definitions, and some methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991.]

A. Discharge Prohibitions

1. The discharge of wastewater to the WWTF is prohibited until the Discharger has submitted, and the Executive Officer has approved, documentation that either (a) a public entity has accepted the ownership and operation of the WWTF or (b) a private entity has been created with adequate long-term financial resources and expertise to operate and maintain the WWTF in compliance with this Order.
2. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
3. Bypass or overflow of untreated or partially treated waste is prohibited.
4. Discharge of sewage from a sanitary sewer system at any point upstream of the dosing tanks including septic tanks is prohibited. Discharge of treated wastewater outside of the leachfield area is prohibited.

5. Surfacing of wastewater within or downgradient of the leachfield is prohibited.
6. Discharge of waste classified as 'hazardous' under Section 2521, Chapter 15 of Title 23 or 'designated', as defined in Section 13173 of California Water Code is prohibited.

B. Discharge Specifications

1. The monthly average flow to the leachfield shall not exceed 6,000 gallons per day.
2. The wastewater treatment and leachfield areas shall not cause pollution or a nuisance as defined by Section 13050 of the California Water Code .
3. Public contact with wastewater and the leachfield shall be precluded or controlled through such means as fences and signs, or acceptable alternatives.
4. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.
5. Objectionable odor originating at the leachfield areas shall not be perceivable beyond the limits of the Cool Village leachfield.
6. All treatment, storage, and leachfield areas shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
7. Application of wastewater shall be confined to the leachfields as defined in this Order.
8. The Discharger shall operate all systems and equipment to maximize treatment of wastewater and optimize the quality of the discharge. In particular, the following items shall be completed in accordance with the Operation and Maintenance Plan required by the Provisions:
 - a. The Discharger shall conduct inspections of the septic tanks and treatment system on at least an annual basis.
 - b. The Discharger shall cut the vegetation and remove the plant litter from the leachfield as needed to prevent root intrusion into the leachlines and drainage rocks.
 - c. The Discharger shall annually evaluate whether wastewater is evenly distributed to all the leachlines and make modifications to the systems as necessary.
 - d. The Discharger shall properly maintain the sewage piping, septic tanks, and treatment system including the timely removal and disposal of accumulated scum/sludge. Sludge

and solid waste removed from septic tanks shall be pumped and hauled only by a licensed septage hauler. Septic tanks that are cracked or otherwise damaged shall be promptly repaired or replaced. Septic tank filters shall be cleaned on a routine basis.

9. The WWTF shall have sufficient treatment, storage, and disposal capacity to accommodate allowable wastewater flow and design seasonal precipitation during the winter months. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
10. A 100-foot buffer zone shall be maintained between any watercourse and the leachfields.
11. A 100-foot buffer zone shall be maintained between any spring, domestic well or irrigation well and the leachfields.
12. A 50-foot buffer zone shall be maintained between the leachfields and any parcels that are not part of this project area (as shown on Attachment C).

C. Effluent Limitations

1. Effluent discharged from the dosing tanks to the leachfield shall not have a pH less than 6.5 or greater than 8.5.
2. Treated effluent discharged from the dosing tanks to the leachfield shall not exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
BOD ¹	mg/L	40	80
Total Coliform Organisms	MPN/100ml	23	240

¹BOD denotes 5-day biochemical oxygen demand at 20° C

D. General Solids Disposal Specifications

Sludge means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the facility.

1. Sludge and solid waste shall be removed from screens, septic tanks, Advan Tex treatment system, and dosing tanks as needed to ensure optimal plant operation.
2. Treatment and storage of sludge shall be confined to the treatment facility property, and shall be conducted in a manner that precludes infiltration of waste constituents into soils in a mass

or at concentrations that will violate the Groundwater Limitations of this Order.

3. Any storage of residual sludge or solid waste at the facility shall be temporary, and the waste shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the Groundwater Limitations of this Order.
4. Residual sludge and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at disposal sites operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy this specification.

E. Groundwater Limitations

The discharge, in combination with other site-derived sources, shall not cause underlying groundwater to contain waste constituents in concentrations statistically greater than background water quality.

F. Provisions

1. All of the following reports shall be submitted pursuant to Section 13267 of the California Water Code and shall be prepared by a registered professional as described by Provision F.2.
 - a. By **1 April 2003**, the Discharger shall submit a workplan for characterization of groundwater quality. The workplan shall describe the installation of sufficient groundwater wells to allow evaluation of the groundwater quality upgradient and downgradient of the leachfields. Every monitoring well shall be constructed to yield representative samples from the uppermost layer of the uppermost aquifer and to comply with applicable well standards. The workplan shall be consistent with, and include the items listed in, the first section of Attachment E, "*Items to be Included in a Monitoring Well Installation Workplan and a Monitoring Well Installation Report of Results.*"
 - b. By **1 August 2003**, the Discharger shall submit a groundwater well installation report that is consistent with, and includes the items listed in, the second section of Attachment E. The report shall describe the qualified consultant that the Discharger will use to collect groundwater samples.
 - c. **At least 30 days prior to use**, the Discharger shall submit a report certifying that the WWTF has been constructed in accordance with this Order. The report at a minimum shall provide the following:
 - i. The number, size, and construction material of each septic tank installed within the Cool Village shopping center.

- ii. A detailed description of the treatment system, including size of the unit, the material that the tank is constructed of, flow design capacity, and the number and types of filters contained within the unit.
 - iii. A description of how the treatment system complies with Standard Provision A.9 (loss of power).
 - iv. A detailed description of the type of wastewater disinfection system has been installed and is capable of meeting effluent limits prescribed in this Order.
 - v. A description of the type and location of the flow meter which has been installed to meet compliance with the Monitoring and Reporting Program.
 - vi. A detailed description of the leachfield disposal system, including: the total lineal feet of leachline intalled, dimensions of the leachfield trenches, depths at which the leachlines were set, number and locations of all leachline observation ports, and types of infiltrators installed. In additon, this report shall provide a detailed description of the cut off drain that was installed above the leachfield including: the length, width, and depth of the trench; types of material (i.e., geotextile, plastic, drainage rock, etc..) used to construct the drain system; and the locations of drains and where flow is directed to.
- d. **At least 30 days prior to use**, the Discharger shall submit and implement an Operation and Maintenance (O&M) Plan for the WWTF and leachfield. The O&M Plan shall instruct field personnel on how to manage the day-to-day discharge operations to comply with the terms and conditions of this Order and how to make field adjustments, as necessary, to preclude nuisance conditions (e.g., surfacing water). It shall also include a nuisance condition troubleshooting flowchart and a description of notification requirements. A copy of the O&M Plan shall be kept at the facility for reference by operating personnel. Key personnel shall be familiar with its contents. The O&M Plan shall include the following documents as report appendices:
- i. A Vegetation Control Plan which describes how vegetation will be controlled and maintained in the leachfield to prevent root intrusion and damage.
 - ii. A Inspection Plan which decribes the procedures for annually inspecting and testing grease traps, septic tanks, and treatment system to determine if collected grease/scum/sludge need to be removed, and evaluates whether wastewater is evenly distributed to all the leachlines and make modifications to the systems as necessary.
 - iii. A maintenance plan which describes maintanace procedure of the grease traps, sewage piping, septic tanks, and treatment system including the timely removal and disposal of accumulated scum/sludge. Sludge and solid waste removed from

grease traps, septic tanks, and treatment system shall be pumped and hauled only by a licensed septage hauler. Septic tanks that are cracked or otherwise damaged shall be promptly repaired or replaced. Septic tank and treatment system filters shall be cleaned on a routine basis

- e. By **1 October 2004**, the Discharger shall submit a *Background Groundwater Quality Study Report*. For each groundwater monitoring parameter/constituent identified in the Monitoring and Reporting Program, the report shall present a summary of monitoring data, a calculation of the concentration in background monitoring well(s), and a comparison of background groundwater quality to that in wells used to monitor the facility. Determination of background quality shall be made using the methods described in Title 27, Section 20415(e)(10), and shall be based on data from at least four consecutive quarterly (or more frequent) groundwater monitoring events.
 - f. If groundwater monitoring reports show that groundwater exceeds the groundwater limitation required by this Order, then within **120 days** of the Executive Officer's request, the Discharger shall submit a technical report which shall include a comprehensive evaluation of treatment and control measures that address full mitigation of the source of exceedance(s). The report shall describe treatment and control alternatives studied, the alternative(s) recommended for implementation, and any specific methods the Discharger proposes to monitor and assure continuous optimal performance, the source of funding, and proposed schedule for implementation. The recommended improvements and implementation schedule are subject to the Executive Officer's approval, but the schedule for full implementation shall be as short as practicable and not exceed two years unless specifically approved by the Regional Board.
2. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain a statement of qualifications of the responsible licensed professional(s) as well as the professional's signature and/or stamp of the seal.
 3. The Discharger shall comply with the Monitoring and Reporting Program No. R5-2003-0023, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.
 4. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly

referenced as "Standard Provision(s)."

5. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to assure compliance with terms of this Order.
6. Upon the reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow, the Discharger shall take any necessary remedial action to (a) control or limit the volume of sewage discharged, (b) terminate the sewage discharge as rapidly as possible, and (c) recover as much as possible of the sewage discharged (including wash down water) for proper disposal. The Discharger shall implement all applicable remedial actions including, but not limited to, the following:
 - a. Interception and rerouting of sewage flows around the sewage line failure;
 - b. Vacuum truck recovery of sanitary sewer overflows and wash down water;
 - c. Use of portable aerators where complete recovery of the sanitary sewer overflows are not practicable and where severe oxygen depletion is expected in surface waters; and
 - d. Cleanup of sewage-related debris at the overflow site.
7. The Discharger shall report to the Regional Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."
8. The Discharger shall not allow waste-free wastewater to be discharged into the wastewater collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Waste-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of wastes.
9. The Discharger shall submit to the Regional Board on or before each compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharge shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Board in writing when it returns to compliance with the time schedule.
10. In the event of any change in control or ownership of land or waste discharge facilities described herein, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.
11. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or recession of this Order.

12. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
13. The Regional Board will review this Order periodically and will revise requirements when necessary.

I, THOMAS R. PINKOS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 31 January 2003.

THOMAS R. PINKOS, Executive Officer

AMENDED
JSK: 1/31/03

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2003-0023

FOR
BOB AND KATHY ELLINGHOUSE AND COOL VILLAGE, LLC.
COOL VILLAGE WASTEWATER TREATMENT FACILITY
EL DORADO COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring domestic wastewater, treated effluent, leachfields, and groundwater. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer. Regional Board staff shall approve specific sample station locations prior to implementation of sampling activities.

This MRP is effective upon date of signature; however, only groundwater samples need to be collected until the WWTF has been constructed and is in use. In the meantime, the Discharger shall submit monthly status reports and quarterly groundwater monitoring reports as described in the "Reporting" section of this MRP.

All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form.

Field test instruments (such as those used to test pH) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated prior to each monitoring event;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

SEPTIC TANK MONITORING

The Discharger shall monitor grease traps, septic tanks, and the treatment system and report this information in the annual reports. Grease traps, septic tanks, and the treatment system shall be inspected annually and pumped as described below.

<u>Parameter</u>	<u>Units</u>	<u>Type of Measurement</u>	<u>Minimum Inspection</u>	<u>Reporting Frequency</u>
Sludge depth and scum thickness in each compartment of each grease trap, septic tank, and treatment system	Feet	Staff Gauge	Annually	Annually

<u>Parameter</u>	<u>Units</u>	<u>Type of Measurement</u>	<u>Minimum Inspection</u>	<u>Reporting Frequency</u>
Distance between bottom of scum layer and bottom of outlet device	Inches	Staff Gauge	Annually	Annually
Distance between top of sludge layer and bottom of outlet device	Inches	Staff Gauge	Annually	Annually

Grease traps, septic tanks, and the treatment system shall be pumped when any one of the following conditions exist or may occur before the next inspection:

- a. The combined thickness of sludge and scum exceeds one-third of the tank depth of the first compartment; or,
- b. The scum layer is within three inches of the outlet device; or,
- c. The sludge layer is within eight inches of the outlet device.

EFFLUENT MONITORING

Effluent monitoring shall begin when the treatment system has been constructed and is operational. Wastewater effluent shall be monitored prior to discharge to the leachfield. Samples shall be collected from the leachfield dosage siphon. Grab samples are considered adequately composited to represent the wastewater. Effluent monitoring shall include, at a minimum, the following:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Flow	gpd	Metered	Continuous	Monthly
pH	Std. units	Grab	Weekly	Monthly
Total Suspended Solids	mg/l	Grab	Weekly	Monthly
BOD ₅ ¹	mg/l	Grab	Weekly	Monthly
Total Coliform Organisms ²	MPN/100 ml	Grab	Weekly	Monthly
Total Dissolved Solids	mg/l	Grab	Monthly	Monthly
Nitrates as Nitrogen	mg/l	Grab	Monthly	Monthly
Total Kjeldahl Nitrogen	mg/l	Grab	Monthly	Monthly
Standard Minerals ³	mg/l	Grab	Annually	Annually

¹ BOD₅ denotes five-day, 20° Celsius Biochemical Oxygen Demand.

² Using a minimum of 15 tubes or three dilutions.

³ Standard Minerals shall include, at a minimum, the following elements and compounds: Barium, Boron, Calcium, Iron, Magnesium, Manganese, Sodium, Potassium, Chloride, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.

LEACHFIELD MONITORING

Leachfield monitoring shall begin when the treatment system is constructed and is operational. The Discharger shall conduct a visual inspection of the leachfield on a weekly basis and the results shall be included in the monthly monitoring report. Evidence of surfacing wastewater, erosion, field saturation, runoff, or the presence of nuisance conditions shall be noted in the report. If surfacing water is found, then a sample shall be collected and tested for pH, total coliform organisms, and total dissolved solids. In addition to the visual inspections, monitoring of the leachfields shall include the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Application Rate ¹	Gal/acre•day	Calculated	Monthly	Monthly
Leachline Riser Inspection ²	Inches	Measurement	Monthly	Monthly

¹ The application rate for each leachfield

² The Discharger shall measure the depth of any wastewater in each observation port riser. The Discharger shall provide the depth of each disposal trench and the corresponding depth of soil remaining between the ponded wastewater and the surface.

GROUNDWATER MONITORING

Beginning with the third quarter 2003, the Discharger shall conduct the following groundwater monitoring program. Prior to construction of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Board for review and approval. Once installed, all new wells shall be added to the MRP, and shall be sampled and analyzed according to the schedule below.

Prior to sampling, groundwater elevations shall be measured and the wells shall be purged at least three well volumes until pH and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Water table elevations shall be calculated and used to determine groundwater gradient and direction of flow. Samples shall be collected using approved EPA methods. Groundwater monitoring shall include, at a minimum, the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling and Reporting Frequency³</u>
Groundwater Elevation ¹	0.01 Feet	Measurement	Quarterly
Depth to Groundwater	0.01 Feet	Calculated	Quarterly
Gradient	Feet/Feet	Calculated	Quarterly
Gradient Direction	Degrees	Calculated	Quarterly
pH	S.U.	Grab	Quarterly
Total Dissolved Solids	mg/l	Grab	Quarterly
Nitrates as Nitrogen	mg/l	Grab	Quarterly

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling and Reporting Frequency</u> ³
Ammonia as Nitrogen	mg/l	Grab	Quarterly
Total Coliform Organisms ²	MPN/100 ml	Grab	Quarterly

¹ Groundwater elevation shall be based on depth-to-water using a surveyed measuring point elevation on the well and a surveyed reference elevation.

² Using a minimum of 15 tubes or three dilutions

³ Groundwater monitoring begins with the third quarter 2003.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, leachfield, groundwater etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer or Geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board on the **1st day of the second month following sampling** (i.e. the January Report is due by 1 March). At a minimum, the reports shall include:

1. Results of effluent and leachfield monitoring;
2. If the treatment and disposal system has not yet been constructed, then the monthly report shall state so, and shall provide the anticipated date of construction;
3. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format;
4. If requested by staff, copies of laboratory analytical report(s); and
5. A calibration log verifying calibration of all hand held monitoring instruments and devices used to comply with the prescribed monitoring program.

B. Quarterly Report

The Discharger shall establish a quarterly sampling schedule for groundwater monitoring such that samples are obtained approximately every three months. Quarterly monitoring reports shall be submitted to the Board by the **1st day of the second month after the quarter** (i.e. the January-March quarterly report is due by May 1st) and may be combined with the monthly report. The Quarterly Report shall include the following:

1. Results of groundwater monitoring;
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;
3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any;
4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
5. A comparison of the monitoring data to the groundwater limitations and an explanation of any violation of those requirements;
6. Summary data tables of historical and current water table elevations and analytical results;
7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum; and
8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

An Annual Report shall be prepared as the fourth quarter monitoring report. The Annual Report will include all monitoring data required in the monthly/quarterly schedule. The Annual Report shall be submitted to the Regional Board by **1 February** each year. In addition to the data normally presented, the Annual Report shall include the following:

1. The contents of the regular groundwater monitoring report for the last quarter of the year;
2. If requested by staff, tabular and graphical summaries of all data collected during the year;
3. A discussion of compliance and the corrective action taken, as well as any planned or proposed

actions needed to bring the discharge into full compliance with the waste discharge requirements;

4. Results of the effluent annual monitoring;
5. A summary of the annual grease trap, septic tank, and treatment system inspections and of the volumes septage and sludge removed from the WWTF and corresponding disposal site.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain a statement by the discharger, or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

The Discharger shall implement the above monitoring program as of the date of this Order.

THOMAS R. PINKOS, Executive Officer

31 January 2003

(Date)

AMENDED

JSK: 1/31/03