



California Regional Water Quality Control Board

San Diego Region



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[http:// www.waterboards.ca.gov/sandiego](http://www.waterboards.ca.gov/sandiego)

June 8, 2007

CERTIFIED – REGISTERED MAIL
7003 3450 0003 7392 7183

Mr. Bert Caster
Oak Tree Ranch
2239 Black Canyon Road, #80
Ramona, CA 92065

In reply refer to:
SCR: 01-0036.02:MMATA

RESPONSE TO COMMENTS AND ERRATA SHEET FOR TENTATIVE ORDER NO R9-2007-0046; AN ORDER UPDATING WASTE DISCHARGE REQUIREMENTS FOR THE OAK TREE RANCH PRIVATE RESIDENTIAL COMMUNITY WASTEWATER TREATMENT PLANT, NEAR RAMONA, SAN DIEGO COUNTY

Dear Mr. Caster:

The San Diego Regional Water Quality Control Board (Regional Board) has reviewed all written comments received regarding tentative Oder No. R9-2007-0046. Comments were received from David Thornburg on behalf of Oak Tree Ranch, Inc. and from the Environmental Law Foundation.

Enclosed are the Regional Boards Responses to Comments document and corresponding Errata Sheet. Full copies of comment letters will be available at the Regional Boards website at <http://www.swrcb.ca.gov/rwqcb9/rb9board/Jun-07.html>.

The comments and Regional Board Responses to Comments document and Errata Sheet will be provided to the Regional Board for consideration prior to the June 13, 2007 Regional Board regularly scheduled meeting. Regional Board staff will present the tentative order with errata to the Regional Board for adoption at their regularly scheduled meeting on June 13, 2007. The meeting will begin promptly at 9:00 a.m. and will be held at the following location:

San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123

California Environmental Protection Agency

Mr. Bert Caster
Oak Tree Ranch

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June 8, 2007

The heading portion of this letter includes a Regional Board code number noted after "In reply refer to:" In order to assist us in the processing of your correspondence please include this code number in the heading or subject line portion of all correspondence and reports to the Regional Board pertaining to this matter.

If you have any questions regarding the above, please contact Ms. Michelle Mata at (858) 467-2981, or via email at mmata@waterboards.ca.gov.

Respectfully,



MICHAEL P. McCANN
Supervising Water Resource Control Engineer

Enclosure: Response to Comments document and Errata Sheet

cc:

Dan Gildor
Environmental Law Foundation
1736 Franklin Street, 9th Floor
Oakland, CA 94612

David R. Thornburg
P.O Box 5263
Auburn, CA 95604

California Environmental Protection Agency



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**SAN DIEGO REGIONAL BOARD RESPONSES TO COMMENTS
TENTATIVE ORDER R9-2007-0046**

A. Comments submitted by Mr. David Thornburg, on behalf of Oak Tree Ranch, Inc. on April 11, 2007

GENERAL COMMENTS & MAJOR CONCERNS	REGIONAL BOARD RESPONSES
<p>1. <u>Tentative Order does not include a statement to allow operation of the existing plant until the new portions of the plant are completed</u></p>	<p>The tentative Order will be revised to allow operation of the existing plant until the new plant is completed. See Errata Sheet item No. 5.</p>
<p>2. <u>Tentative Order does not have interim effluent limitations: Allow the current limits to remain in effect until September 31, 2007 when the plant modifications are completed.</u></p>	<p>The tentative Order will be revised to include interim discharge specifications, which will remain in effect until September 31, 2007. See Errata Sheet item No. 5.</p>
<p>3. <u>Page 10, Section C.8, Monitoring and Reporting: Revise the Order No. from R9-2006-0110 to R9-2007-0046.</u></p>	<p>The tentative Order No. will be revised. See Errata Sheet item No. 7</p>
<p>4. <u>Page 10, Section C:</u> Add a paragraph to read: "The operation of the plant shall be reviewed at least monthly by a person certified as a Wastewater Treatment Plant Operator by the Water Resources Control Board at the level of Grade 3 or above."</p>	<p>California Code of Regulations Title 23, Division 3, Chapter 26 specifies no person shall operate a wastewater treatment plant unless that person has been certified by the division as a wastewater treatment plant operator or operator-in-training at a grade appropriate for the class of plant being operated. A wastewater treatment plant as defined in Title 23 includes privately-owned treatment systems that are regulated by the Public Utilities Commission (PUC). Section 230.6 of the Public Utilities Code identifies a "Sewer System Corporation" as including every corporation or person owning, controlling, operating, or managing any sewer system for compensation within this state. This facility is not regulated by the PUC and it is therefore not appropriate to include the recommended language. The tentative Order does include provisions for the discharger to properly operate and maintain all facilities and systems of treatment and control which</p>

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GENERAL COMMENTS & MAJOR CONCERNS	REGIONAL BOARD RESPONSES
<p>are installed or used by the discharger to achieve compliance with conditions of the tentative Order. This provision includes proper operator staffing.</p>	<p>No changes to the tentative Order are necessary.</p>
<p>5. <u>Page 10, Section D, Biosolids Specifications:</u> Allow biosolids to be transported and disposed in the City of San Diego treatment process under an Industrial Waste Acceptance Permit issued by the appropriate department...</p>	<p>Changes have been made to the Order. See Errata Sheet item No. 8</p>

**SAN DIEGO REGIONAL BOARD RESPONSES TO COMMENTS
TENTATIVE ORDER R9-2007-0046**

B. Comments submitted by the Environmental Law Foundation on April 11, 2007

GENERAL COMMENTS & MAJOR CONCERNS	REGIONAL BOARD RESPONSES
<p><u>Tentative Order impermissibly allows groundwater degradation in violation of California's Antidegradation Policy:</u></p> <ol style="list-style-type: none"> 1. The Tentative Order allows the discharge of waste with a Total Dissolved Solids (TDS) levels projected up to 680 mg/l despite the fact that TDS levels presently found in the groundwater underlying the facility average 418 mg/l. 2. The Tentative Order does not include findings that demonstrate the degradation is consistent with the maximum benefit to the state, that the Order employs the best practical treatment control, and that there are no other feasible alternatives. 3. There are no requirements in the Order for the discharger to apply waste in accordance with agronomic rates to ensure no further groundwater degradation. 	<p>Oak Tree Ranch has been discharging wastewater containing total dissolved solids (TDS) concentrations up to a maximum of 1,000 mg/l since 1965. Groundwater monitoring conducted by the discharger reported concentration levels of TDS well below the basin plan objectives, indicating the groundwater has assimilative capacity for this constituent. Although there is no information on the assimilative capacity of the basin for other constituents, this site meets the minimum soil separation requirements between the bottom of the subsurface disposal system and the groundwater level established by this Regional Board. These requirements are in place to ensure effluent does not cause exceedances of groundwater quality objectives. As an additional measure the tentative Order has been updated to include groundwater monitoring for additional constituents.</p> <p>Oak Tree Ranch is located northeast of the community of Ramona, in an area surrounded mostly by individually owned conventional septic tanks and leach fields. The Ramona Municipal Water District maintains two Wastewater Treatment Facilities: San Vicente and Santa Maria. The treatment plants specifically serve the downtown Ramona area and the San Diego Country Estates. As such, connection to the existing sanitary sewer system is not currently available. Based on existing information, the proposed treatment system provides the best practical treatment control. The proposed plant is designed to produce good quality effluent in a cost effective manner.</p> <p>Projected TDS effluent concentrations are anticipated to be less than 680 mg/l. Currently the average effluent TDS concentration is 633 mg/l. An increase in flow from 20,000 gallons per day to 40,000 gallons per day has a potential to increase groundwater concentrations above existing levels; however, the effects are anticipated to be minimal. A slight increase in existing TDS concentration is in the maximum benefit to the people, does not unreasonably affect present and anticipated beneficial uses, and does</p>

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GENERAL COMMENTS & MAJOR CONCERNS	REGIONAL BOARD RESPONSES
	<p>not result in water quality less than that prescribed the water quality control plan.</p> <p>The tentative Order will be revised to include, in the findings, soil percolation rates and wastewater application rates that will protect existing beneficial uses of the Santa Maria Hydrologic Area.</p> <p>See Errata Sheet item No. 1</p>

**SAN DIEGO REGIONAL BOARD RESPONSES TO COMMENTS
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C. Comments submitted by Mr. Mike Hedenland, on behalf of Oak Tree Ranch, Inc. on June 6, 2007

GENERAL COMMENTS & MAJOR CONCERNS	REGIONAL BOARD RESPONSES
<p>The recommended discharge specifications for nitrogen of 2.6 mg/l as N as a 12-month average with a daily maximum of 6.52 mg/l as N may be difficult to attain.</p> <ol style="list-style-type: none"> The Report of Waste Discharge calculates an effluent concentration of 2.14 mg/l as N. However this is a calculated value and it would be difficult to assure the attainment of this extremely high efficiency in a day in and day out basis. Also, the basin plan objective is 10 mg/l as NO₃ and not N. The current concentration of NO₃ in the groundwater is approximately 20 mg/l. We request that the annual average effluent concentration be set at 10.0 mg/l as N. This level will not further degrade groundwater. Using the Hantzsche-Finnermore Mass Balance Equation it can be illustrated that a discharge of 10.0 mg/l as N will not further degrade groundwater. The equation is as follows: $N_r = \frac{I * n_w * (1-d) + R * n_b}{(I + R)}$ where: N_r = final NO₃-N concentration in groundwater after mixing, mg/l I = Volume of wastewater entering the soil averaged over the gross property are, in/yr n_w = Total -N concentration of wastewater, mg/l d = fraction of NO₃-N lost in Denitrification R = average recharge rate of rainfall, in/yr n_b = background NO₃-N concentration without wastewater discharge, mg/l Assigned values are as follows: I = 40,000 gallons per day over 92 acre property 	<p>Discharge specifications for total nitrogen were derived based on water quality objectives for the Santa Maria Valley Hydrologic Area of 10 mg/l as NO₃ (2.2 as N). Discharge specifications were established for total nitrogen since, in wastewater, many forms of nitrogen exist including ammonia, organic nitrogen, nitrate, and nitrite. Also, discharge specifications and monitoring requirements for total nitrogen are required because it is assumed that there is complete conversion from all forms of nitrogen into nitrate, when the effluent reaches the groundwater.</p> <p>Groundwater monitoring from an existing well, upgradient of the disposal facility, reveals levels of NO₃ in the groundwater of 20.0 mg/l. Exceedances in background concentrations are not considered when calculating discharge specifications. Exceedances in background levels demonstrate the basin does not have assimilative capacity for this constituent and therefore requires stringent specifications to reduce further impacts to the basin.</p> <p>The Discharge specifications will be revised to include a 30% removal. The removal includes a 20% removal by denitrification in the soil as well as 10% uptake and removal by vegetation. See Errata Sheet item No. 6</p> <p>Upon review of the Hantzsche-Finnermore Mass Balance Equation it has been determined that it is not acceptable to use this approach since the final concentration of nitrogen in groundwater, after mixing, would result in a concentration that exceeds the basin plan water quality objective.</p>

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GENERAL COMMENTS & MAJOR CONCERNS	REGIONAL BOARD RESPONSES
<p> $n_w = 10.0$ mg/l $D = 0.5$ mg/l $R = 20$ inches/year $n_b = 4.5$ mg/l $\text{NO}_3\text{-N}$, or 19.98 as NO_3 </p> <p> The calculated prediction of nitrogen in groundwater (when effluent is 10 mg/l or less) equates to $N_r = 4.18$ mg/l as $\text{NO}_3\text{-N}$ or 18.55 mg/l as NO_3. This concentration is less than existing conditions in the groundwater. </p>	