

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of)
CAROL ANN CLOSE;)
SAN DIEGO COUNTY MILK PRODUCERS)
COUNCIL;)
SAN DIEGO COUNTY FARM BUREAU)
For Review of Resolution Nos. 87-)
104 and 87-105 of the California)
Regional Water Quality Control)
Regional Board, San Diego Region,)
for the Van Tol Dairy. Our Files)
Nos. A-490, A-495 and A-499.)

ORDER NO. WQ 88-12

BY THE BOARD:

On July 3, 1987, the California Regional Water Quality Control Board, San Diego Region (Regional Board), adopted Resolutions No. 87-104 and 87-105 for the proposed Van Tol Dairy. Resolution No. 87-104 is a Resolution adopting a Mitigated Negative Declaration and Resolution No. 87-105 is a Resolution Conditionally Waiving Adoption of Waste Discharge Requirements for the proposed dairy.

Timely petitions were received from Carol Ann Close on behalf of a Coalition of Concerned Residents, from the San Diego County Milk Producers Council and from the San Diego County Farm Bureau. The petitions were deemed complete on November 20, 1987.

Petitioners have agreed to a 60-day time extension in this matter.

As the three petitioners raise legally and factually related issues on the proposed Van Tol Dairy, the three petitions will be considered together. Title 23 California Code of Regulations Section 2054.

I. BACKGROUND

John Van Tol currently operates a dairy with approximately 700 milking cows on Dye Road, Ramona, San Diego County. This dairy is currently regulated by waste discharge requirements (Regional Board Order No. 76-43) and an enforcement Time Schedule Order (Regional Board Order No. 87-117).

John Van Tol proposed to operate a new dairy adjacent to the existing dairy. The new dairy will confine a maximum of 1,200 cows (1,000 milking cows) and the proposed new facilities include a milk barn, 14.1 acres of corrals, a 1.23 acre wastewater holding pond, 45 acres of pasture land, and a manure composting area.

On May 5, 1986, Van Tol submitted an incomplete report of waste discharge for the new dairy. The Regional Board staff

requested additional information, and at the same time initiated the environmental review process required under the California Environmental Quality Act (CEQA). An Initial Study determined that the proposed project could have a significant environmental effect. Subsequent revisions of the project proposal convinced the staff of the Regional Board that the significant environmental effects previously identified could be mitigated and an Environmental Impact Report (EIR) would not be required. Consequently, on July 3, 1987, the Regional Board considered and adopted the Mitigated Negative Declaration for the new dairy, Resolution No. 87-104. On the same day, the Regional Board adopted a resolution conditionally waiving adoption of Waste Discharge Requirements for the new dairy, Resolution No. 87-105. This resolution requires implementation of best management practices and water quality monitoring at the dairy. Resolution No. 87-105 states that the waiver will be terminated after development of a Regional Board Dairy Waste Management Policy.

The proposed dairy is located approximately 1-1/2 miles south of the Ramona town center in the Santa Maria Hydrographic Subunit. Existing land use in the area includes dairies, grazing land, and scattered single family homes on large lots.

Santa Maria Valley is bounded by igneous rocks and underlain by residuum. Most of the wells in the valley extract water from the residuum with only a few producing water from fractures in the

igneous rock. Ground water in the area is used for domestic and municipal supply, agricultural supply, and stock watering. These existing beneficial uses are specified in the basin plan, but the basin plan states that existing water quality in the basin does not meet criteria established to protect the beneficial uses of domestic and municipal supply, irrigation, and livestock watering. The basin plan also includes water quality objectives for the ground water in the basin. The water quality objectives applicable to these petitions are 1,000 parts per million (ppm) for total dissolved solids (TDS) and 10 ppm for nitrate. The primary drinking water standard for nitrate is 45 ppm.

On March 17, 1988, the State Board adopted Resolution No. 88-35, Approval of an Amendment to the Water Quality Control Plan for the San Diego Basin Adding a Regional Dairy Waste Management Policy to Chapter 5, Implementation Plan. Resolution No. 88-35 approved most of the basin plan amendments adopted by the Regional Board on November 16, 1987.

II. CONTENTIONS AND FINDINGS

The Close petition contends that the new dairy would have a significant adverse effect on groundwater quality in the area. This petitioner requests the State Board to rescind the two Regional Board resolutions and to require preparation of an EIR for the proposed project. The Farm Bureau and Milk

Producer's Council petitions dispute the findings of potential significant adverse environmental impacts and contend that the project is exempt from CEQA and that waste discharge requirements should be adopted for the new dairy no more stringent than the Confined Animal Facilities regulations. 23 California Code of Regulations Section 2560 et seq. Consequently, the primary issue in this matter is the potential impact of the proposed dairy on groundwater quality in the area.

1. Contention: The proposed dairy will have a significant adverse effect on groundwater quality.

Findings: The proposed dairy would have a significant adverse effect on groundwater quality.

Discussion: Groundwater impacts from dairies can occur through discharge of milk barn wastewater and corral runoff, percolation through manured areas, and application of manure to the pasture or cropland. To mitigate the impacts of dairy waste on groundwater quality, Confined Animal Facilities regulations require implementation of various statewide minimum standards. Title 23 California Code of Regulations Section 2560 et seq. The Regional Board resolutions in question require implementation of these standards at the new dairy plus the additional measures that animal waste solids will be segregated, to the extent feasible, from dairy wastewater, that a feed lane washdown system

will not be installed at the dairy and that groundwater will be monitored. The Regional Board staff determined that between 20 and 45 acres of irrigation land are required for the disposal of the nitrogen available in the wastewater and runoff. An additional 75 acres are required for spreading manure. Since only 45 total acres are available for disposal of waste, staff has calculated that between 66 and 100 percent of the dairy's manure must be removed from the dairy site.

The question that arises is, even if all the minimum standards and mitigation measures identified by the Regional Board are scrupulously followed, whether water quality will be degraded. At a minimum, the remaining sources of polluted water which can reach groundwater are both dairy washwater and runoff and percolating water from manured areas. The Regional Board staff evaluated these wastewater sources in a 1975 staff report, entitled "Dairy Farm Waste Staff Report". This report characterizes wastewater quality from these sources to be as follows: Wash wastewater TDS of 1,100-2,600 ppm and total nitrogen¹ of 140-650 ppm; Runoff from manured areas TDS of 3,500 ppm and total nitrogen of 70-560 ppm.

Wastewater from these sources, with the exception of wastewater that percolates into the ground, is routed into a

¹ This nitrogen can exist in a number of forms. Upon application to the soil most of the nitrogen will be oxidized to nitrate. Total nitrogen concentrations must be multiplied by a factor of 4.5 to derive potential nitrate levels.

retention pond. Some of the nitrogen will be removed in the pond by denitrification. The wastewater is then used for irrigation where an additional portion of the nitrogen will be removed by plant uptake and further denitrification. It is not possible to quantify these losses. Tests cited in the "Dairy Farm Waste Staff Report", however, indicate that even a well-run irrigation field is unable to consistently achieve a nitrate concentration passing the root zone of less than 45 ppm. It should be noted that unlike nitrogen concentrations, TDS levels will not be reduced by these management procedures.

Potential groundwater impacts will be dependent upon not only pollutant concentrations but also the quantity of wastewater discharged and the assimilative capacity of the aquifer. Assuming an average annual rainfall of 17 inches, approximately 20 acre-feet of corral runoff and percolation will be generated. Also, assuming between 50 and 100 gallons per day per cow of washwater, approximately 56 to 112 acre-feet of washwater per year will require disposal.

With respect to the issue of aquifer assimilative capacity, two groundwater samples were collected by the Regional Board on May 13, 1987 at different locations at the present Van Tol dairy. These samples contained high TDS (921 ppm and 1013 ppm) and nitrate (261 ppm and 270 ppm) concentrations. Therefore, the aquifer in this area does not appear to have any

remaining assimilative capacity. Given this conclusion, together with such factors as the quantity of wastewater requiring disposal, the concentrations of pollutants in the wastewater, and the water quality objectives for groundwater in the basin, it is reasonable to conclude that the proposed dairy would have a significant adverse effect on groundwater quality. This conclusion is, of course, limited to the unique facts of this case.

As was previously stated, the foregoing analysis is based on the assumption that the new dairy will scrupulously adhere to the mitigation measure identified in the mitigated negative declaration. Even though it has been concluded that groundwater impacts would occur even under the best of conditions, the discharger's history of compliance with previous Regional Board orders should be considered in order to evaluate the potential effectiveness of the minimum standards and proposed mitigation measures. The existing Van Tol dairy is regulated under waste discharge requirements in Order 76-43 adopted in September 1976.

The record indicates that the discharger has never come into full compliance with that order. The extent of noncompliance is impossible to evaluate since annual monitoring reports, required by Order No. 76-43, have never been submitted. However, violations have been documented regarding unauthorized

surface water discharges, failure to provide waste retention and disposal facilities for a portion of the corral area, failure to provide adequate storage capacity for milkbarn washwater and making material changes in the treatment facilities and milking herd size without filing a report of waste discharge.

The Regional Board has addressed these violations by issuance of enforcement time schedule Order No. 87-117 to the Van Tol Dairy which required the dairy to comply with Order No. 76-43 by March 1, 1988. Regional Board staff advises that compliance has not been achieved with Order No. 87-117. This compliance history does not instill confidence in the discharger's capacity to comply with the required standards and mitigation measures. In this regard, the discharger has already requested that one of the mitigation measures, a prohibition on a feedlane washdown system, be rescinded.

In addition, as required by State Board Resolution No. 88-35, the Regional Board has submitted a list of dairies in priority order starting with those which pose an imminent threat to existing beneficial uses or overly basins with objectives near or better than existing water quality and where the dairy contributes a large percentage of the salts and nitrates. The existing Van Tol dairy ranks 4th of 27 on that priority list.

2. Contention: The Farm Bureau and Milk Producer's Council petitions assert that Waste Discharge Requirements should be adopted for the new dairy that are no more stringent than the Confined Animal Facilities regulations.

Findings: The Confined Animal Facilities regulations are minimum standards, and Regional Boards should adopt additional requirements where necessary to prevent water quality degradation or impairment of beneficial uses.

Discussion: Regional Board Resolution No. 87-105 waived adoption of waste discharge requirements provided that the discharger implements the conditions of the Resolution. The Resolution further provided that the waiver will be terminated at such time as a Dairy Compliance Policy is included in the basin plan. As stated previously, the regional Dairy Compliance Policy became effective March 17, 1988, upon this Board's adoption of Resolution No. 88-35. The Regional Board has been awaiting further guidance from this Board prior to taking the termination action as specified in Resolution No. 87-105 or other further action on the new dairy.

While it is true that waste discharge requirements must include the minimum requirements specified in the Confined Animal Facilities regulations, these regulations clearly are "minimum" standards and a Regional Board may impose additional

requirements, if such additional requirements are necessary to prevent degradation of water quality or impairment of beneficial uses of waters of the state. Section 2560(c). Section 13263(a) of the Water Code also states that "requirements shall implement relevant water quality control plans, if any have been adopted, and shall take into consideration other beneficial uses to be protected, [and] the water quality objectives reasonably required for that purpose". We conclude that the record supports the Regional Board's finding that additional measures beyond the minimum standards are required.

3. Contention: Petitioner Close contends that the conditional waiver of waste discharge requirements in Order No. 87-105 was inappropriate and should be rescinded.

Findings: The State Board agrees that the waiver of waste discharge requirements was inappropriate and should be rescinded.

Discussion: Water Code Section 13269 provides that waste discharge requirements may be waived by a Regional Board when such waiver "is not against the public interest". In view of our conclusions regarding the impact the new dairy would have on water quality, it is apparent that a waiver in this case is not in the public interest.

Having reached this conclusion, it is necessary to consider what feasible requirements, if any, could be included in waste discharge requirements for the Van Tol Dairy that would protect water quality. The main chemical parameters of concern in this basin are TDS and nitrates. There is limited data available on the existing groundwater quality in the basin, but the record does include analyses collected by the Regional Board staff during the preparation of the Initial Study.² The representation of the data as either upgradient or downgradient of the Van Tol Dairy is not meant to imply that there is any hydraulic connection between the wells, but only to establish the topographic location of the wells in the basin relative to the Van Tol Dairy. In any case, the data clearly establish that the basin consistently does not meet the nitrate water quality objective of 10 ppm and it is not supporting the existing

<u>2</u>	<u>Location</u>	<u>Nitrate (ppm)</u>	<u>TDS (ppm)</u>
	1-1/2 mile upgradient of dairy	67.5	661
	3/4 mile upgradient of dairy	27	739
	Van Tol Dairy	261	921
	Van Tol Dairy	270	1,013
	1/4 mile downgradient of dairy	166.5	984
	1/2 mile downgradient of dairy	369	1,071
	3/4 mile downgradient of dairy	279	1,014
	1 mile downgradient of dairy	40.5	395
	1 mile downgradient of dairy	162	715
	1 mile downgradient of dairy	76.5	435

beneficial use of municipal and domestic supply (primary drinking water standard--45 ppm). In some instances, the TDS objective of 1,000 ppm is also exceeded.

The State Board has addressed the issue of appropriate waste discharge requirements under similar circumstances in previous orders. Specifically, State Board Order No. WQ 82-5 outlined the following strategy based on general principles established in State Board Order Nos. 73-4, WQ 79-14, and WQ 81-5.

"Where the constituent in a groundwater basin is already at or exceeding the water quality objective, the Regional Board must set limitations no higher than the objectives set forth in the Basin Plan.³

"Exceptions to this rule may be granted where it can be shown that a higher discharger limitation is appropriate due to system mixing or removal of the constituent through percolation through the ground to the aquifer.

"The Regional Board should set limitations more stringent than the Basin Plan objectives if it can be shown that these limitations can be met by using 'best efforts'....

"Where the receiving water is of better quality than the Basin Plan objective, the Regional Board may set limitations which are more or less stringent than the objective."

Application of these principles in this case would result in a discharge limitation of 10 ppm nitrate because the

³ Where compliance with the limitations cannot be achieved by reasonable efforts, review of the appropriateness of the water quality objectives may be required.

water quality objective for nitrate is presently being exceeded. The TDS limit would be set at 1,000 ppm because the portion of the basin in the area of the proposed dairy has a groundwater concentration of approximately 1,000 ppm. The point of application of these limits could either be beneath the root zone of the irrigated field or at the point of discharge. Unfortunately, the record clearly demonstrates that the proposed dairy will not be able to meet these potential permit limits.

Review of basin plan water quality objectives may be indicated where compliance with permit limits cannot be achieved by reasonable efforts. Since water in the basin is being used for domestic supply, the only reasonable change in water quality objectives for the basin would be to raise the nitrate objective to 45 ppm. This change would still leave most of the basin in violation of the objective and it would not address the TDS problem at the proposed dairy.

It could be argued that the data indicate that the basin as a whole still has some TDS assimilative capacity. However, support for such an argument would require an extensive hydrologic assessment in the area. The limited data available indicate that the local assimilative capacity is already being used by the existing dairy and further expansion is not defensible.

State Board Resolution No. 88-35 directs the State Board staff to provide the Regional Board by October 1, 1988, a simple salt balance procedure which utilizes existing information to produce concentrations based upon ten-year projections for use in setting basin plan objectives and setting waste discharge requirements. However, based upon the above discussion of this proposed project and the apparent lack of assimilative capacity in the basin, this simple salt balance procedure will not be particularly helpful in establishing requirements for the proposed Van Tol dairy.

Water Code Section 13243 provides that a Regional Board may specify certain conditions or areas where the discharge of waste will not be permitted. Our previous discussion indicates that water quality objectives for nitrates are being exceeded and water quality objectives for TDS are marginal in this basin and that the proposed dairy could substantially degrade groundwater quality. If the discharger wishes to continue with this project as proposed based on existing groundwater data, discharges from the project should be prohibited pursuant to Section 13243.⁴

4. Contention: Petitioners Farm Bureau and Milk Producer's Council contend that the Initial study findings of potentially significant environmental impacts were incorrect and

⁴ While the existing record supports a conclusion that the groundwater has no remaining assimilative capacity for salts and nitrates, the discharger could attempt to develop additional evidence to rebut this conclusion. Alternatively the discharger could modify the scope of the project and resubmit it.

the new dairy should be declared exempt from CEQA. Petitioner Close, on the other hand, contends that a full EIR should be required.

Findings: The Initial Study findings of potentially significant environmental impacts were correct and the new dairy is subject to CEQA. However, as discharges from the proposed project should be prohibited, it is not necessary to prepare an EIR.

Discussion: CEQA, Public Resources Code Section 21000 et seq, sets requirements for the consideration of environmental impacts resulting from activities approved or carried out by state and local agencies. The Act clearly applies to the discretionary decision of a Regional Board when it is deciding whether or how to carry out or approve a project. 14 California Code of Regulations Section 15002(i). A review of the record indicates that the Regional Board correctly assumed lead agency status for the project. Approval and regulation of a new dairy is such a project and is subject to the requirements of CEQA. We have already concluded above that the new dairy potentially could have adverse impacts on groundwater quality.

Petitioner Close contends that Regional Board Resolution No. 87-104 should be rescinded and preparation of an EIR directed. It is not necessary to reach this issue in view of

our above conclusion that discharges from the project as proposed should be prohibited. Denial of waste discharge requirements does not require the preparation of an EIR.

III. SUMMARY AND CONCLUSIONS

1. Waste discharge from the proposed Van Tol dairy would have a significant adverse effect on water quality.

2. The conditional waiver of waste discharge requirements in Regional Board Order No. 87-105 was inappropriate.

3. The proposed dairy is subject to the requirements of CEQA.

4. Waste discharge from the proposed dairy as described should be prohibited unless the discharger can establish that existing data demonstrating a lack of assimilative capacity is in error.

IV. ORDER

Regional Board Order No. 87-105 is rescinded. In all other respects the petitions are denied.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on October 20, 1988.

AYE: W. Don Maughan
Darlene E. Ruiz
Edwin H. Finster
Eliseo M. Samaniego
Danny Walsh

NO: None

ABSENT: None

ABSTAIN: None

Maureen Marche
Maureen Marche
Administrative Assistant
to the Board