



ENVIRONMENTAL LAW FOUNDATION

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April 23, 2007

Via Electronic Mail (plowry@waterboards.ca.gov)

Ms. Polly Lowry
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

Re: Tentative Waste Discharge Requirements General Order for Existing Milk Cow Dairies

Dear Ms. Lowry:

On behalf of the Environmental Law Foundation, a non-profit, public interest organization dedicated to protecting water quality throughout California, I would like to thank you for the opportunity to submit comments on the Tentative Waste Discharge Requirements General Order for Existing Milk Cow Dairies authorizing the discharge to land of waste by existing milk cow dairies within the region. It is our hope that these discharges will not degrade groundwater in and around these facilities—a requirement under California's antidegradation policy, which requires that groundwater quality be maintained. (*See State Water Resources Control Board Resolution 68-16 (Oct. 24, 1968).*) As discussed further below, however, we believe that the Tentative Order does not comply with that policy. Accordingly, we ask the Regional Board to revise the Tentative Order so as to ensure that no degradation will occur as a result of these discharges.

A. California's Antidegradation Policy

The State Water Resources Control Board first announced a policy to maintain existing water quality in 1968 in Resolution 68-16. In that resolution, the State Board announced its intent that water quality that exceeds water quality standards "shall be maintained to the maximum extent possible." (State Water Resources Control Board, Resolution 68-16 (Oct. 24, 1968).) Accordingly, the Board ordered that

Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of

such water and will not result in water quality less than that prescribed in the policies.

(*Id.*) This policy applies equally to surface as well as to ground water.

To implement this policy the State Board mandated that

Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

(*Id.*) Thus, these two requirements must be met *prior* to any action by the Regional Board that might impact groundwater quality.

B. The Tentative Order Impermissibly Allows Groundwater Degradation in Violation of California's Antidegradation Policy

1. The Tentative Order Fails to Apply the Best Practical Treatment or Control

The Central Valley Regional Water Quality Control Board does not have a good history of implementing the state's antidegradation policy with regard to regulating discharges that adversely impact groundwater. For instance, with regard to food processing facilities, Board staff admitted in 2005 that the Board has placed

[l]ittle emphasis . . . on assuring conformance with all of the required elements of the State Water Resources Control Board Resolution No. 68-16, *Statement of Policy With Respect to Maintaining High Quality Waters In California* (hereafter Antidegradation Policy), which is incorporated by reference in the Basin Plan. Waste discharge requirements have allowed wastewater storage and percolation-disposal from unlined or poorly-lined impoundments and application of wastewater to cropland at "agronomic rates" for the nutrients contained in the wastewater. Management measures were largely focused on prevention of nuisance conditions (e.g., stillage guidelines from the wine industry) without test plots or other direct demonstration that they would be effective in preventing unreasonable degradation of groundwater quality.

* * *

Although required by the State Board's Antidegradation Policy, dischargers have not been required to implement "best practicable treatment and control practices" ("BPTC"; i.e., the best of treatment or control practices that have been demonstrated to be technologically practicable and economically feasible) to ensure that any affect on groundwater quality was the minimum reasonably achievable.

(Central Valley Regional Water Control Board, Staff Report accompanying Item 23 on the Board's Jan. 28, 2005 meeting agenda, p. 4, at http://www.swrcb.ca.gov/rwqcb5/available_documents/waste_to_land/FoodProcessingInfoItem/StaffRpt.pdf.) The result in the context of food processing facilities is that over 90% of the food processors that monitor groundwater are known to have or suspected to have degraded groundwater with salts, nitrates, and other pollutants.

Here, such similar degradation has resulted from milk cow dairies within the Central Valley as a result of past practices that the Tentative Order perpetuates. As the Tentative Order properly notes, "[g]roundwater monitoring shows that many dairies in the Region have impacted groundwater quality." (Tentative Order, p. 5.) The Order goes on to note that even dairies that were thought to have good waste management and land application practices have contributed to elevated salt and nitrate levels beneath the production and land application areas. (*Id.*) Indeed, a study commissioned by the Regional Board to evaluate the effectiveness of existing regulations to prevent groundwater contamination concluded that "it is reasonable to conclude that current . . . requirements are insufficient to prevent groundwater contamination from confined animal facilities, particularly in vulnerable geologic environments."¹ (Brown, Vence and Associates, Review of Animal Waste Management Regulations, Task 2 Report: Evaluate Title 27 Effectiveness to Protect Groundwater Quality (Oct. 2003), p. 3.) Thus, it is perfectly clear from the record that there is the potential for continued degradation as a result of the continuation of existing practices. Under the state's antidegradation policy, then, such practices must be upgraded. (*See* Resolution 68-16 (requiring application of best treatment or control practices).)

¹ *See generally* ,North Carolina Department of Environment and Natural Resources, Impact of Animal Waste Lagoons on Ground Water Quality (1998) (finding that lagoons constructed to NRCS standards in either moderately vulnerable or vulnerable sites showed evidence of groundwater contamination); Lee, G. Fred and Anne Jones-Lee, Groundwater Quality Protection Issues (Feb. 2007), available at <http://www.gfredlee.com/plandfil2.htm#gwprotection> (explaining that a simple calculation reveals one foot of 10⁻⁶ cm/sec compacted clay under one foot of leachate head can be penetrated within a few months); Arnold, Stephen D. and Edward A. Meister, Dairy Feedlot Contributions to Groundwater Contamination, A Preliminary Study in New Mexico (1999) (finding that clay linings were less effective than synthetic liners for reducing groundwater contamination).

Ms. Polly Lowry

Comments re: General WDRs for Existing Milk Cow Dairies

April 23, 2007

Page 4

Yet despite this requirement, the Tentative Order fails to require such sufficiently upgraded practices in order to satisfy the state's antidegradation policy. For instance, the Tentative Order only requires dischargers to provide an engineering evaluation of existing ponds "when groundwater monitoring demonstrates that the existing pond has adversely affected groundwater quality." (Tentative Order, General Specification 5.) Implementing the state's antidegradation policy in this manner, though, is *completely backward*. That policy requires the implementation of the best practicable treatment or control of a discharge *prior* to degradation occurring. The trigger is the potential for degradation, which can readily be determined independent of groundwater monitoring. It is enough to analyze soil permeability, the construction of the containment ponds, and the result of similar practices throughout the state of California, which as noted above have been insufficient to prevent degradation. If, based on these factors *alone*, there is the potential for groundwater degradation, then the Order must require the best practicable treatment or control for the waste discharges. Period. After all, "[i]t costs much less in the long run—and the result is much more certain—to spend the money needed for an effective water quality control program than to try to salvage water resources that have been allowed to become unreasonably degraded." (Final Report of the Study Panel to the California State Water Resources Control Board (Mar. 1969), p. 1.) Accordingly, the Regional Board must require dairies to demonstrate that all existing ponds meet the performance standards set out for all new or reconstructed ponds. The absence of such a requirement patently marks a failure to properly implement the state's antidegradation policy given that the evidence clearly demonstrates that degradation of the state's groundwater will continue under the Tentative Order.

Furthermore, the Regional Board's strategy in implementing the state's antidegradation policy—using existing supply wells to detect degradation before more stringent measures are applied—is not only backward, it is also entirely incompetent given that these wells, which tend to be sited in areas least likely to be contaminated, usually up gradient of the dairy facilities or otherwise protected from contamination, will not likely detect any degradation before such degradation has already become widespread and pervasive, all in violation of the state's antidegradation policy. This incompetence cannot be cured by the fact that the Executive Officer can order additional monitoring under the Tentative Order because that Order fails to present any deadline by which all the regulated facilities will be required to have such additional monitoring in place. Thus, there is no assurance that the regulated facilities will ever be required to install the additional monitoring wells that are necessary to ensure compliance with the state's antidegradation policy. To meet the best practical treatment or control standard, the Tentative Order must ultimately ensure that *all* facilities will have installed appropriate monitoring wells necessary to promptly detect groundwater degradation. The failure of the Tentative Order to do this further demonstrates the Regional Board's failure to apply the best practical treatment or control for these degrading discharges.

Indeed, it is entirely unclear how the Tentative Order properly implements the best practical treatment or control standard when it authorizes variances from such practices. For instance, the Tentative Order only requires that one foot of freeboard be maintained in below

grade ponds. Title 27, however, requires a minimum two feet of freeboard for all surface impoundments and authorizes less freeboard only for

surface impoundments located on the interior portions of a waste management facility where: 1) these interiormost impoundments are designed such that potential overflows would be reliably conveyed by gravity flow and discharged to other surface impoundments having adequate capacity to receive such diversion without exceeding their respective freeboard limitations; 2) the operation implements a properly developed water balance plan; and 3) the facility is provided with a fail-safe emergency retention area solely for the purpose of containing wastes due to surface impoundment failures.

(Cal. Code Regs., tit. 27, § 20375.) The Tentative Order, however, does not ensure that any of these conditions be obtained prior to the dairy being authorized to maintain only one foot of freeboard. The Order simply provides for a blanket variance from the two foot freeboard requirement, clearly in violation of Title 27 regulations. It cannot be fairly said, then, that the Tentative Order applies the best practical treatment or control to prevent degradation.

Other deficiencies in the Tentative Order's implementation of the best practical treatment or control standard include:

- providing too long of a time frame for the development of waste management and nutrient management plans given that impermissible degradation will continue to occur in the interim; 60 days should be sufficient particularly in light of readily available templates for such plans;
- failing to provide for such requirements as vadose monitoring, the sweeping of accumulated manure from concrete alleys, and other preconstruction, siting, design, construction, operation, maintenance, and closure requirements set out as recommended *minimum* criteria in the Brown, Vence and Associates Report;²
- providing for the conveyance of process wastewater and other contaminated water in unlined channels without first establishing that there is no risk of groundwater degradation from such practices;

² In this connection, the failure of the Regional Board to explain why these requirements have been excluded from the Tentative Order amounts to arbitrary and capricious decision making. (*Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974), 11 Cal.3d 506, 515-16 (agency must provide explanation bridging the analytical gap between the raw evidence and the decision made).)

- failing to provide for the development of a month-to-month water balance; and
- failing to provide a real, *enforceable* assurance against the improper and degrading disposal of solid manure wastes despite the recognition by another Regional Board that the vast majority of salt and nitrate contamination of groundwater from dairies is associated with the application of solid manure to agricultural lands³—the Order allows the offsite disposal of manure subsequent only to an agreement between the discharger and some third party in lieu of the third party first obtaining waste discharge requirements.

Overall, then, it cannot be fairly concluded that the Tentative Order properly incorporates the best practical treatment or control. Issuing the Order, therefore, would violate the state's antidegradation policy.

2. The Tentative Order Fails to Ensure that Any Degradation Is in the Maximum Benefit to the People of the State

Not only does the Tentative Order fail to ensure that the best practical treatment or control is applied to the dairy waste discharges, the Order also fails to ensure that the resulting degradation is in the maximum benefit to the people of the state. Up to 90% of the Central Valley's population relies on groundwater for drinking water. Many of those that will be (and have been) impacted by the degradation arising from dairy operations, moreover, live in low income communities. Yet the Tentative Order authorizes practices that will degrade these communities' drinking water supplies without any analysis of any of the costs and benefits associated with that degradation. It is not clear, then, on what basis any finding regarding the benefit to the people of the state can rely.

Moreover, it is imperative that the plans developed to limit and contain the degradation be transparent. In this connection, though, the Tentative Order provides for no public review of critical nutrient management and waste management plans by the public, let alone for review by the Board or Staff. The requirement for the development of these plans is thus reduced to nothing more than an unenforceable, paper exercise. Instead, the Tentative Order must provide for complete transparency by providing opportunities for the public to review a facility's nutrient and waste management plans so that the *public* can ensure that the plans and any degradation that might arise are actually in the *public* interest.

Lastly, the Regional Board ought also seriously consider issuing a general NPDES permit under the Clean Water Act rather than just waste discharge requirements. Issuing a NPDES

³ See Santa Ana Regional Water Quality Control Board, Order No. 99-11.

Ms. Polly Lowry

Comments re: General WDRs for Existing Milk Cow Dairies

April 23, 2007

Page 7

permit would be appropriate in this case given that the dischargers covered by the general order all would otherwise have potential to discharge to surface water. The advantage of issuing a NPDES permit instead of waste discharge requirements is that a NPDES permit is enforceable by the public should implementation by a dairy covered under the permit prove to be inadequate. In other words, to ensure that any degradation arising from implementing this regulatory program is in the public interest, the Board ought to share enforcement with the public itself. Issuing a NPDES permit, therefore, would best serve the state's antidegradation policy.

As it currently stands, though, the Tentative Order fails to demonstrate that its issuance would maximize the benefit to the people of the state. Issuing the Tentative Order, therefore, would violate the state's antidegradation policy.

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Thank you for your time in considering these comments. If you have any questions, please do not hesitate to contact me. I look forward to working with you and the Regional Board to address these concerns.

Sincerely,



Dan Gildor

cc (via email): David Sholes (dsholes@waterboards.ca.gov)