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November 5, 2010

Charlene Herbst
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite #200
Rancho Cordova, CA 95670

Via e-mail: cherbst@waterboards.ca.gov

Re: Comments from Deanne Meyer, Ph.D. on selected sections of the tentative order for General Waste Discharge Requirements and General National Pollutant Discharge Elimination System (NPDES) Permit for Existing Milk Cow Dairy Concentrated Animal Feeding Operations within the Central Valley Region

Dear Ms. Herbst:

Thank you for the opportunity to provide input into the tentative order for General WDR and NPDES permit for Existing Milk Cow Dairies. As with previous comments provided during the development and implementation of the General Order for Existing Milk Cow Dairies, comments herein take into consideration the requirements of the Regional Board, as well as the utility of collected information to provide information to dairy operators and their consultants to be compliant with regulatory needs. General comments are provided for the General Orders as well as Attachment D. Monitoring and reporting should provide data to inform operators prior to making management decisions, allow calculations for quantities of nutrients applied or removed from fields, or in cases of unauthorized discharge, should provide sufficient information to the Regional Board for compliance documentation.

In addition to specific comments made herein, please review comments from the UC Dairy Quality Assurance Workgroup submitted Nov 5, 2010 on draft revisions to the Monitoring and Reporting Program for Existing Milk Cow Dairies as these are applicable to this review as well.

Summary

General Order:

1. Provide an attachment to or otherwise note differences between the General Order for Existing Milk Cow Dairies and this General Order.
2. Modify typos in GO
3. Modify statements to be consistent with information and/or the General Order for Existing Milk Cow Dairies

Attachment C:

1. C.11.B 1.a. Modify paragraph.
2. C.11.B 2.a. Modify paragraph based on comments regarding the limited use of soil N values.
3. C. 12.C.1. insert words "water application".

Attachment D. Monitoring and Reporting Program

1. Modification required for sampling and analytical procedures. This information is incorrect as currently presented.
2. Modify Table 1 Production Area weekly inspections related to depth markers.
3. Review comments on MRP for anaerobic digester and co-digester facilities.
4. Carefully review document for dates.
5. Page 9 B. 1. Define or eliminate term “minimum elements of the nutrient management plan”
6. Page 9 B. 2. e. Remove recordkeeping requirement unless obligated by CAFO Rule
7. Page 9 B. 3. C. remove “, or volume and density”
8. Page 10 3. J. Define as Nutrient Budget
9. Page 10 3. K. Define as nutrient application calculations
10. Page 10 3. M. Insert here or elsewhere the obligation that the operator must periodically inspect equipment used for land application of manure, litter, or process wastewater.
11. Page 13 4. Remove.
12. Page 14 item 13. Make item consistent with Attachment C

Attachment F:

1. Remove volume and density as options for data collection.

General Order

1. By definition, dairies seeking coverage under this WDR/NPDES permit are already covered under the General order for Existing Milk Cow Dairies. It is important to clearly identify differences in requirements between their prior regulatory requirements and their current regulatory requirements once covered under this Order. An attachment or factsheet should be put together defining those differences. Alternatively, use of alternative font type or size would be effective in accomplishing the same task. This will streamline the process for the regulated community, their consultants, and RB5 staff to understand differences. Additionally, where possible retain same nomenclature for associated attachments.
2. The following typos were identified in the General Order and should be corrected.
 - a. Page 2 item 9. Typo shouldl s/b should
 - b. Page 2 item 11. A. typo oaf s/b of
 - c. Page 3 items 20 and 21. Discharges s/b Dischargers
3. Modify statements to be consistent with information and/or the General Order for Existing Milk Cow Dairies
 - a. Page 6 item 36 Modify or remove paragraph. The statement “Many discharges of waste from milk cow dairies” is not substantiated by RB5 data provided since the adoption of the General Order,
 - b. Page 7 item 38. Modify or remove paragraph. Most of the content of this paragraph is no longer applicable as the operators covered under the General Order are well into the implementation process and already have both the Nutrient and Waste Management Plans and should be implementing both.
 - c. Page 12 Prohibition 15 Modify to be consistent with the General Order. Such a discharge should be prohibited if it occurs outside the operation of an NMP. It's quite possible that tailwater is ok to discharge to surface water within 60 days of land application of manure or process wastewater. As identified in the MRP for existing Milk Cow Dairies, it is appropriate to sample potential discharge and determine EC before water is discharged to waters of the state.
 - d. Page 15 item 18 The requirement of the CAFO Rule is to report the 7 day rainfall in the event of an off-site discharge. There are numerous ways to obtain this information and operators should not be required to become their own rain gauge station and be required to maintain information on farm for 5 years.
 - e. Page 17 item 3. Include the words ‘for informational purposes’ so that the nutrient analysis is not viewed as a guaranteed analysis subject to CDFA requirements.
 - f. Page 19 Effluent limitation 2. There is no recognized method to determine available N in soils. There is insufficient technical information to adequately provide guidance on this effluent limitation.

Attachment C

1. C.11.B 1.a. Modify paragraph. “Planned rates of nutrient application shall be determined based on soil test results, crop tissue test results, nutrient credits, manure and process wastewater analysis, crop requirements and growth stage, seasonal and climatic conditions, and use and timing of irrigation water. Actual applications of nitrogen to any crop shall be limited to the amounts specified below.” This paragraph contains some inconsistencies that make interpretation unclear. Previous comments have already discussed the limited value of

soil test results. There is also limited value of crop tissue test results (this would be for a previous crop) in determining the planned rate of nutrient application for a future crop. As an example, the nutrient content of winter forage is irrelevant when determining application rates for a corn crop.

2. C.11.B 2.a. Modify paragraph based on comments regarding the limited use of soil N values. "Total nitrogen applications to a land application area prior to and during the growing of a crop shall be based on pre-plant or pre-side dress soil analysis to establish residual nitrogen remaining in the field from the previous crop to establish early season nitrogen applications." Pre-side dress soil analysis has not been utilized by California growers. The climate and the irrigation water delivery system provide greater impact on the availability and location of nitrate in soil than pre-plant or pre-side dressed soil analysis. See comments from UC Workgroup on the limited value of soil testing
3. C. 12.C.1. insert words "water application" after the word irrigation in the first sentence.

Attachment D. Monitoring and Reporting Program

1. Clarification required for sampling and analytical procedures. Page 1 Modify and correct the statement "Dischargers must follow sampling and analytical procedures as specified in this MRP and have analyses conducted by a laboratory certified for such analyses by the California Department of Health Services." The California Department of Health Services does not certify laboratories for methods related to solid manure, soil and plant tissue analyses. See comments submitted 11/1/2010 from Drs. D. Meyer and D. Holstege regarding the laboratory methods and certifications identified in the draft WDR for anaerobic digesters and co-digesters on dairy facilities.
2. Modify Table 1 Production Area weekly inspections related to depth markers. The CAFO Rule requires weekly inspection to indicate whether there is sufficient minimum capacity necessary to contain the runoff and direct precipitation of the 25year, 24-hour rainfall event. Having sufficient capacity (as per the CAFO Rule) is different than document level. The former can be accomplished by a one or two marker system. If a one marker system is used, this marker is placed at the appropriate location (potentially in a side embankment) and should always be visible unless one is in the process of experiencing a 25-yr, 24 hour storm event. A two marker system typically has a lower marker as indicated in the one marker system, and an additional marker indicating the maximum high water level for which the impoundment is designed.
3. Review comments on MRP for anaerobic digester and co-digester facilities. These comments were submitted 11/1/2010 and are attached herein.
4. Carefully review document for dates. The review process for this MRP is 2010. Therefore an appropriate date to begin soil sampling is the summer of 2013 (5 years after the 2008 start date under the General Order).
5. Page 9 B. 1. Define or eliminate term "minimum elements of the nutrient management plan". The minimum elements of the nutrient management plan are not described.
6. Page 9 B. 2. e. Remove recordkeeping requirement unless obligated by CAFO Rule. The requirement to maintain records documenting storage design volume are all described in the WMP. It is already available at the facility and therefore redundant to include it within this list of record keeping requirements. It also is not a typical record, but a report/set of calculations to determine required storage capacity.
7. Page 9 B. 3. C. remove ", or volume and density". This needs to be removed to be consistent with Table 3 manure analytical requirements.
8. Page 10 3. J. Define as Nutrient Budget. Tremendous confusion remains with some dairy professionals who have yet to differentiate between a nutrient budget, what a person plans to do, and the actual recordkeeping data (3.k) quantifying what was done. Including the term nutrient budget here should aid in reducing some of the existing confusion.
9. Page 10 3. K. Define as nutrient application calculations. This comment is included with the previous comment to improve the understanding of those individuals providing assistance to dairy operators.
10. MRP Page 10 3. M. Insert here or elsewhere the obligation that the operator must periodically inspect equipment used for land application of manure, litter, or process wastewater. Having a record keeping requirement (record results from an analysis) absent the requirement to do the action (the analysis) will confuse people.
11. Page 13 4. Remove. This paragraph appears to require inclusion of detailed nutrient budgets for each land application area annually. Additionally, it includes a technical determination that soil nitrogen be considered

in the calculation. The information to require calculations based on field specific determination of soil levels of nitrogen including plant available nitrogen lacks technical guidance. As identified in previous comments (UC comments for revised MRP) insufficient information is available to establish methodology to collect a true representative sample and analyze it to determine plant available nitrogen. Furthermore, the need to go through the expense and large uncertainty associated with soil N analyses is not necessary to meet the NMP criteria of restricting N application to 1.4 x crop N removal. It is unclear if there is anything gained by having operators provide field specific nutrient budgets as a component of their annual report. The budget is merely a projection of when and what are to be applied not the actual accounting of the applications (item 5 MRP page 13 accomplishes the accounting).

12. Page 14 item 13. Make item consistent with Attachment C. Attachment C refers to a nutrient management specialist. The CAFO Rule refers to a nutrient management planner. Make consistent or identify in both areas that these are equivalent.

Appendix F

1. Modify this document to remove volume and density as options for data collection. Weight and moisture are preferred as there is no standard approved method available to determine density on manure removed from operations. Standard methods for bulk density determination typically requires an undisturbed sample, however, such a sample would not likely allow collection of representative material. Additionally, the material is clearly disturbed (loaded into trucks) to determine volume.

A thorough review of all documents of the draft WDR was not done due to time constraints and the need to comment on two other documents available for review by the Regional Board.

Sincerely,

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Livestock Waste Management Specialist
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