



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2

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DEC 28 2016

Mr. Angus Eaton
Director, Bureau of Water Resources Management
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-3508

Dear Mr. Eaton:

The U.S. Environmental Protection Agency (EPA) conducts periodic reviews of state programs as part of its oversight responsibilities under the Clean Water Act (CWA). As part of this process, the EPA conducted comprehensive assessments of animal agriculture programs in the six Chesapeake Bay (Bay) states as part of its oversight responsibilities under the Bay Total Maximum Daily Load (TMDL) and National Pollutant Discharge Elimination System (NPDES) Permit Program. In addition, the EPA committed to perform assessments related to Bay state animal agriculture programs in the settlement agreement that resolved the lawsuit Fowler et al. v. EPA, No. 1:09-cv-0005-CKK (D.D.C.). I am writing to you today to outline the EPA's findings based on a review of Nutrient Management Plans (NMPs) for four concentrated animal feeding operations (CAFOs) subject to CWA CAFO permits in New York State.

The federal regulatory program for CAFOs under the NPDES program requires permitted CAFOs to develop NMPs. The NMPs must address nine minimum measures that are related to management of manure and other potential pollutant sources at CAFOs to protect surface water quality. In the context of the NPDES regulatory program, NMPs serve two primary purposes:

1. NMPs provide a guide for day-to-day operational decisions related to management of manure and other potential pollutant sources at CAFOs to ensure ongoing compliance with permit requirements; and
2. NMPs include site specific requirements related to nutrient management and land application that are the basis for permit effluent limits, which must be identified by regulatory authorities and made available for public review.

Therefore, it is essential that NMPs are current, accurate, and complete so that management decisions are based on the correct information to best protect water quality while achieving crop yield potential and other operational goals. Just as important is that NMPs are clear and well organized to provide the transparency needed by the regulatory authority to identify appropriate site specific requirements and by both the regulatory authority and the public to ensure the requirements are protective of water quality.

The New York State Department of Environmental Conservation (NYSDEC) is authorized to administer the NPDES program in New York. NYSDEC permits CAFOs under its Clean Water Act (CWA) State Pollutant Discharge Elimination System (SPDES) General Permit for CAFOs (currently GP-04-02; revised draft in progress is GP-0-16-002). The permit requires CAFOs to develop a comprehensive nutrient management plan (CNMP) in accordance with technical standards identified and referenced in the permit. The CNMP is intended to meet the federal NMP requirements.

The EPA reviewed four CNMPs developed for New York CAFOs to identify whether those CNMPs are consistent with the applicable federal and state regulatory requirements. The EPA consulted the following regulations and technical resources during its review of the four CNMPs:

- The current (2008) federal NPDES CAFO regulations;
- The EPA's NPDES Permit Writers' Manual for Concentrated Animal Feeding Operations, dated February 2012;
- Tetra Tech review/summary of New York state technical standards for nutrient management conducted in 2010;
- Observations in the EPA's New York Animal Agriculture Program Assessments related to NMP requirements;
- The draft New York SPDES General Permit for CAFOs (GP-0-16-002) and EPA Region 2's comments on the draft permit; and
- The Chesapeake Bay Total Maximum Daily Load (Bay TMDL) and New York's Watershed Implementation Plans (WIPs) for achieving the load allocations in the Bay TMDL.

This letter summarizes the issues, findings, and assessment elements common to all four of the New York dairy CAFO CNMPs. These are categorized by CNMP strengths (requirements that were adequately addressed), and shortcomings, or areas that did not meet certain requirements. The latter category also includes elements where we were unable to determine if it was adequately addressed. Last, we include a summary of issues and findings from our review.

CNMP Strengths

Overall, the CNMPs appear to be comprehensive, addressing most of the permit requirements (although in some cases lacking adequate detail as described below). All of the CNMPs are one-year plans which allow a quick turnaround to address deficiencies.

The CNMPs incorporate many Natural Resource Conservation Service (NRCS) conservation practice standards that are referenced in the CAFO general permit. In addition, all of the CNMPs provide detailed Best Management Practice (BMP) and Operation and Maintenance (O&M) requirements, although some include requirements that may not be applicable to the specific CAFO.

Extensive documentation on composting practices and mortality management (required by 40 CFR § 122.42(e)(1)(ii)) is also included in all CNMPs, though the CNMPs do not always clearly indicate which mortality management practice is currently implemented. All of the CNMPs

include Emergency Response Plans that are generally comprehensive, but do have some specific deficiencies. All of the CNMPs include requirements for analysis of land-applied waste and soil testing at the required frequencies and all appear to use certified laboratories to conduct the analyses, though the CNMPs generally lack specific information on soil and manure sampling and handling procedures. All reviewed CNMPs include Phosphorus Index and Nitrogen Leaching Index values and management recommendations based on the risk assessment results.

CNMP Shortcomings

The four CNMPs demonstrate varying levels of organization, including one CNMP organized in logical order according to a table of contents, another CNMP with no apparent organization, CNMPs with tables of contents that do not reflect actual contents, and inconsistent information appearing in different locations in several CNMPs. In general, all of the CNMPs would benefit from better organization and internal review to ensure that they are consistent, current, and accurate. This lack of organization affects the user's ability to find specific information and does not support ease of use by an operator or transparency and understanding by the public, local community, and regulatory agencies. A well-organized, transparent CNMP should include a table of contents, clearly-delineated sections, page numbers, and documentation that reflects the current operations of the CAFO and is consistent throughout.

Internal inconsistency reduces the transparency of the CNMPs. In three of the four CNMPs, individual CNMP sections updated with data from different years prevent verification of BMP implementation and nutrient management requirements. Even the better organized CNMPs include outdated information, which makes it difficult to determine current practices.

All of the CNMPs reviewed include varying amounts of boilerplate language regarding general requirements, practices, and O&M requirements for BMPs. Much of this boilerplate text provides no clear indication as to whether or how those requirements or practices are implemented at the CAFO. Including generic boilerplate language is acceptable, but it should be accompanied by site-specific information that describes the actual BMPs and practices implemented at the specific CAFO to meet requirements.

The recordkeeping sections of the CNMPs include blank forms; however, these forms are often standard and do not precisely correspond to the specific records required by the permit. Sometimes it is also not clear which records or forms are specific to the operations at the CAFO. The CNMPs would benefit from a separate list of site-specific records required for regulatory compliance, including the frequency of record collection and record retention schedules.

In some cases, EPA did not find sufficient information to confirm compliance with requirements that should be addressed in the CNMP. For example, as noted above, the CNMPs do not include sufficient detail to determine whether a facility has adequate storage capacity.

None of the CNMPs include clear reporting and data on manure storage volumes at a level of detail necessary to determine permit compliance. The EPA was unable to determine whether the facility's available manure storage volumes account for all generated waste and expected precipitation. Each CNMP should clearly define the design storm volumes for each waste storage

structure and demonstrate compliance with each of the required storage and other required design elements.

The CNMPs reviewed generally lacked sufficient detail on chemical handling and disposal. According to the EPA's *NPDES Permit Writers' Manual for Concentrated Animal Feeding Operations* (EPA 833-F-12-001), chemicals addressed by NPDES permits at CAFOs include pesticides, petroleum products and by-products, and other hazardous and toxic chemical contaminants used and stored at a CAFO. The CNMPs generally lack detail on how chemicals are stored and handled to prevent contamination of surface waters. None of the CNMPs specify that chemicals should not be disposed of in systems not designed to treat such chemical waste.

None of the CNMPs document compliance with the draft permit requirements related to the discharge of non-contact cooling water to surface waters. However, this is an element of the 2016 draft permit that is not included in the current, administratively extended CWA permit. Therefore, we would not expect this to be addressed. Following the issuance of the 2016 draft CWA permit, CNMPs must document practices associated with the discharge of non-contact cooling water.

None of the CNMPs reviewed include field-specific information at the level of detail necessary to support identification of NMP permit terms, as required by federal CAFO regulations at 40 CFR 122.42(e)(5). CNMPs include some of the required information, but none address in sufficient detail consideration of multi-year phosphorus application or a methodology to manage nitrogen and phosphorus in field applied manure. Three of the four CNMPs do not provide adequate information on the method and timing of manure application as well as maximum amounts of manure nitrogen and phosphorus that can be field applied. Because the EPA added these requirements in the 2003 and 2008 revised CAFO regulations after the issuance of New York's administratively extended CWA permit, which became effective on July 1, 2004, these deficiencies do not necessarily indicate non-compliance. However, the lack of detail does detract from the transparency of the CNMPs. CNMPs under the new CWA CAFO permit that conforms to all federal requirements will need to include adequate field-specific information to develop NMP terms.

In a number of cases, the EPA was not able to determine if certain required CNMP elements were applicable to the specific CAFO. At times the CNMPs did not provide enough information to determine the applicability of the specific requirement to the CAFO. In other instances, the CNMP either lacked clarity or the level of detail necessary to determine compliance with the requirement. Both of these situations contribute to a lack of transparency in the CNMPs, which should clearly identify and describe the permitted activities at the CAFO.

The EPA was also unable to determine the applicability of the clean water diversion requirements for two of the CNMPs reviewed because it was not clear whether the facilities need clean water diversions. The other two CNMPs do not appear to adequately address clean water diversion from the production area. Other areas where applicability of requirements is generally unclear in the CNMPs include waste transfer systems, vegetated treatment areas, heavy use areas, and presence of karst sinkholes.

Recommendations

The EPA recommends that all New York CNMPs include organizational changes that improve transparency and usability. The following are suggestions based on review of the four CNMPs. Please note that these are not necessarily all required CNMP elements under the current New York SPDES General Permit for CAFOs (GP-04-02), or even under the 2008 federal CAFO regulations. However, we expect that many of these recommendations will be addressed in New York's forthcoming SPDES General Permit for CAFOs (GP-0-16-002).

1. Summarize important, or critical, information up front in an executive summary section. This section would describe the facility and the current operation of all major components of the facility including manure generation, process wastewater handling, land application practices, waste storage and waste transfer structures and systems. In addition, the summary should highlight BMPs scheduled for implementation over the period covered by the CNMP, such as fields with special nutrient application restrictions (e.g., those limited to P-based rates, with prior multi-year P applications, fields for which assimilative capacity must be reserved for emergency applications), and other considerations critical to effective nutrient management and surface water protection.
2. Include a checklist that documents compliance with each relevant CWA permit nutrient management plan requirement. The checklist should include identification of permit requirements and the location of information in the CNMP that addresses each requirement.
3. Provide better separation of CAFO-specific information and calculations from "boilerplate" information included with every CNMP. Boilerplate language not applicable to the CAFO should not be included. Relevant boilerplate information should be moved to an appendix, or the CNMP could include a reference page with relevant internet web links. In the latter case, the operator would always have access to the most current version of the referenced requirements (e.g., NRCS conservation practice standards).

Summary

The four CNMPs reviewed by the EPA appear to be comprehensive and the EPA believes that the dairies, in practice, are generally implementing the permit requirements related to their CNMPs. However, the plans themselves often lack the detail or clarity needed to demonstrate that the dairies do meet the requirements of the specific compliance practices that are implemented. The CNMPs include most of the NRCS practices and standards referenced in the permit, but do not always incorporate all of the permit requirements.

The transparency of the CNMPs is reduced by the inclusion of boilerplate language and general requirements which may or may not apply to the specific CAFO. Due to the large amount of information included, and the lack of organization and consistency observed in some of the CNMPs, transparency would be enhanced by including a concise overview at the beginning of

the CNMP to assist operators, regulators, and others in understanding the general configuration of the facility's waste management system and identifying key points and important requirements necessary to protect water quality.

We appreciate the extensive work and close communication with the EPA in this process, and we look forward to continuing our cooperation as NYSDEC works to meet its responsibilities of implementing its SPDES CAFO program.

Please feel free to contact me, or Andrea Coats of my staff if you wish to discuss any of the findings and information above. I can be reached at (212) 637-3730 and Andrea may be reached at (212) 637-3850.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Alyssa Arcaya', written over a faint, illegible background.

Alyssa Arcaya, Acting Chief
Clean Water Regulatory Branch