

Appendix

I

NPDES CAFO Technical Standard Review Checklist

Under the Clean Water Act, all authorized states were required to adopt technical standards by February 12, 2005, pursuant to Title 40 of the *Code of Federal Regulations* (CFR) part 123.36. Part 123.36 requires that technical standards meet the requirements of 40 CFR part 412.4(c)(2) to minimize phosphorus (P) and nitrogen (N) transport to surface waters. Additionally, the 2008 confined animal feeding operation (CAFO) rule requires site-specific *terms of a nutrient management plan* (NMP) to be included in a CAFO's National Pollutant Discharge Elimination System (NPDES) permit. Technical standards provide the basis for critical elements of the site-specific terms of the NMP required by 40 CFR parts 122.42(e)(5)(i) and (ii). The criteria outlined in the attached checklist identifies the information needed in a technical standard to meet the requirements of part 412.4(c)(2) to develop an NMP that contains all the required *terms of the NMP*.

ESTABLISHMENT AND APPLICABILITY OF TECHNICAL STANDARDS (TS)			
1	Has the Director verified or provided (or both) the state's TS?		
2	What mechanism did the state Director use to establish the TS? <i>(check item(s) to right)</i>	Standalone document	
		Permit attachment	
		Permit referenced documents	
		Written into the regulations	
		Regulation reference documents	
Other			
3	How is the specific standard included as a requirement of the CAFO program?	Describe how it is made known that the CAFO NMP must be developed in accordance with the document(s) identified above. For example, does the permit or regulation provide a reference to the listed document(s)? Or does the document itself identify that it is the TS for CAFO operations that meets the requirement of part 412.4(c)(2)?	
APPLICATION RATES			
Field-specific risk assessment			
Criteria	Specify	Reference	
4	Does the TS contain a clearly outlined, field-specific assessment tool for N or P or both transport from the field to surface waters?	Answer Y or N; Describe what the assessment tool is	Provide a reference to where in the TS this is stated
5	Does the assessment tool (above) provide quantitative or qualitative (or both) criteria for determining whether manure application rates can be N-based, P-based, or prohibited?	Answer Y or N; Provide the quantitative criteria and corresponding rate (e.g., 1.5xP removal, 2xP removal, 3xP removal)	Provide a reference to where in the TS this is stated
6	Where the assessment tool requires a P-based application rate, is it constrained to a 1-year P removal rate?	Answer Y or N; If no, provide under what criteria this is allowed and what rate is allowed	Provide a reference to where in the TS this is stated
Amount			
Criteria	Specify	Reference	
7	Does the TS provide the basis for determining expected crop yields?	Answer Y or N; Explain how realistic yield goals are to be calculated or determined and provide any necessary sources of information that are to be used.	Provide a reference to where in the TS this is stated
8	Does the TS provide crop recommendations that are to be used on which to base applications rates?	Answer Y or N; Provide the recommendations that are to be used for different crops and their source	Provide a reference to where in the TS this is stated
9	Does the TS define what a P-based application rate is? (e.g., crop removal rate, soil test, or the choice of either)?	Answer Y or N; Provide what it is	Provide a reference to where in the TS this is stated
10	Does the TS provide the actual removal rates, soil test recommendations or both for crops, depending on the answer to item 9?	Answer Y or N; Provide what the removal rate is or the soil test recommendation	Provide a reference to where in the TS this is stated

Amount (continued)			
Criteria		Specify	Reference
11	Does the TS provide a value for N credits to be given when legume crops are planted?	Answer Y or N; Provide what N credits are applied for different legumes	Provide a reference to where in the TS this is stated
12	Are N mineralization rates provided for different type (dairy, beef, poultry, swine, etc.) of manure?	Answer Y or N; Provide rates with corresponding manure types	Provide a reference to where in the TS this is stated
13	Does the TS address the requirement for a manure [†] analysis?	Answer Y or N	Provide a reference to where in the TS this is stated
14	Does the TS address the frequency of a manure [†] analysis	Answer Y or N; Provide frequency for analysis to be performed	Provide a reference to where in the TS this is stated
15	Does the TS address methods for collecting manure [†] samples?	Answer Y or N; Provide methods to be used	Provide a reference to where in the TS this is stated
16	Does the TS address the components for which the manure [†] is to be analyzed?	Answer Y or N; List components to be analyzed	Provide a reference to where in the TS this is stated
17	Does the TS address acceptable method(s) or laboratories or both for conducting the manure [†] analysis?	Answer Y or N; Provide methods or appropriate laboratories to be used	Provide a reference to where in the TS this is stated
18	Does the TS address the requirement for a soil test?	Answer Y or N	Provide a reference to where in the TS this is stated
19	Do the TS address the frequency of the soil test?	Answer Y or N; Provide frequency for analysis to be performed	Provide a reference to where in the TS this is stated
20	Does the TS address the methods for collecting soil samples?	Answer Y or N; Provide methods to be used	Provide a reference to where in the TS this is stated
21	Does the TS address which components to include in the soil analysis?	Answer Y or N; List components to be analyzed	Provide a reference to where in the TS this is stated
22	Does the TS address acceptable method(s) or laboratories or both for conducting the soil analysis?	Answer Y or N; Provide methods or laboratories to be used	Provide a reference to where in the TS this is stated
Form and Source			
Criteria		Specify	Reference
23	Does the amount, timing, and method address how it is to be applied to each form (solid, semisolid, or liquid) and source of manure?	The <i>form and source</i> of manure can be addressed separately under the amount, timing, or method of land application as it applies.	
Timing—The criteria below are not required to adequately address the timing of manure application. The criteria identified below may be addressed in a TS, although alternative criteria that address the timing of manure application would also be appropriate.			
Criteria		Specify	Reference
24	Does the TS address when manure application should be prohibited or delayed? If yes, do these limitations apply only to certain forms (solid, semisolid, or liquid) of manure?	Answer Y or N; If yes, provide when it is to be delayed	Provide a reference to where in the TS this is stated
25	Does the TS adjust mineralization rates for applications made at different times during the year?	Answer Y or N; Provide rate to be used for different times of land application	Provide a reference to where in the TS this is stated

Method of Application—The criteria below are not required to adequately address the method of manure application. The criteria identified below may be addressed in a TS, although alternative criteria that address the method of manure application would also be appropriate.			
Criteria	Specify	Reference	
26	Does the TS provide volatilization rates to apply to different types of land application methods? (e.g., if manure is incorporated after X number of days, a different volatilization rate is applied)?	Answer Y or N; Provide rate and corresponding land-application method	Provide a reference to where in the TS this is stated
27	Are there any specifications provided for applying different forms (solid, semisolid, or liquid) of manure?	Answer Y or N; Provide any specifications that must be met when land applying different forms of manure (e.g., application of liquid waste through surface or sprinkler irrigation will be timed to prevent deep percolation or runoff. The application rate must not exceed the soil intake/ infiltration rate.)	Provide a reference to where in the TS this is stated
Appropriate Flexibilities			
Criteria	Specify	Reference	
28	Does the TS allow multi-year P application?	Answer Y or N; If yes, define what multi-year application means for this standard	Provide a reference to where in the TS this is stated. This flexibility does not have to be provided for by the state Director. If it is not provided for, the remaining criteria (29 – 31) are not applicable.
29	If yes, does it provide restrictions on when or where (or both) this can occur?	Answer Y or N; provide restrictions that apply	Provide a reference to where in the TS this is stated
30	If yes, is there a restriction that additional P to these fields may not be applied until the amount applied in the single year has been removed through plant uptake and harvest?	Answer Y or N	Provide a reference to where in the TS this is stated
31	If yes, does the standard set N limits that must be met?	Answer Y or N; Provide N limits that must be met	Provide a reference to where in the TS this is stated

¹ Manure in this checklist means manure, litter, or process wastewater.