

Assignment for livestock siting technical committee

Draft July 21, 2010

Scope of Assignment and Desired Outcome

The committee is charged with recommending options for adjusting the existing siting standards and related rule provisions to ensure that the standards keep pace with changing agricultural conditions and remain environmentally protective. The standards in the siting rule must be practical for producers to achieve and for local governments to implement, while continuing to meet the objectives of the siting law.

The scope of this committee is limited. Technical issues related to water quality and odors are the focal point. The committee will not evaluate broader policy areas such as social acceptance of large livestock farms, animal husbandry practices, or other related issues.

We have organized the technical expert committee so that discussions specific to evaluating implementation of an existing standard(s) in ATCP 51 will be handled by three subcommittees 1) nutrient management, 2) engineering, and 3) odor. The basic requirements of each siting standard must be evaluated. Each subcommittee shall consider whether it is necessary to modify or clarify aspects of the current standards to achieve specific objectives, for example scaling requirements based on size. Specific questions that must be considered by the full committee and subcommittees are listed below. Each subcommittee will present recommendations to the full technical committee for discussion. The full technical committee will decide which subcommittee recommendations are forwarded to the DATCP Secretary.

Questions for all subcommittees

1. What documentation, beyond materials currently required by the state application form Appendix A, are necessary to demonstrate that an application complies with the standards?
2. How can compliance monitoring be improved? Should a compliance monitoring schedule be established when a permit is issued? What are the key elements of effective compliance plan?

Nutrient Management Subcommittee

Objective: Does the current approach in Nutrient Management, ATCP 51.16 involving the nutrient management plan checklist, nutrient application restriction maps and ability of the local government to request more information provide a workable system for producers and local government?

1. In reviewing an application for local approval, can a nutrient management plan be properly evaluated for compliance based on the submission of a checklist and a map of land spreading acres, in lieu of a complete nutrient management plan that addresses on the maximum number of animals proposed to be kept at the facility (Appendix A, Worksheet 3, Parts B and C, 390-31 to 390-32)?

2. In reviewing application for local approval, what should be required with respect to the following components of a nutrient management plan?
 - A. The use of rented land for manure spreading, e.g. the appropriate documentation, duration of a rental arrangement?
 - B. Determination and documentation of the field locations with respect to sensitive features and soils, e.g. karst, tile lines?
3. Should applicants be required to more clearly document the following as part of Appendix A, Worksheet 3, Part B, 390-31:
 - A. Manure disposal methods other than land application, e.g. processed and sold under a fertilizer license?
 - B. Application of nutrients other than manure including substances comingled and land applied with manure such as digester substrates?
4. What are the appropriate methods for determining compliance with a nutrient management plan as part of a monitoring program, e.g. database updates or spreading logs? In addition to the updates using the current checklist, should there be an option to demonstrate compliance based on SNAP Plus?
5. Under state law, livestock facilities over 1,000 animal units are restricted from spreading manure in the winter. Under ATCP 51, a local government may adopt local winter spreading restrictions to protect surface and ground water in its siting ordinance, even though it cannot impose local restrictions under Section V.A.2.b(2) of the 590 Standard. What conditions, if any, would serve as an appropriate basis for imposing restrictions and what land-spreading practices might be suitable responses to those conditions?

Engineering Subcommittee

Objective: Are adjustments needed to the requirements for facility design, construction and operation in ATCP 51.18 and 51.20 pertaining to waste storage facilities, manure transfer systems, animal lots, feed storage leachate controls and runoff management based on current research and field experience?

1. How can Worksheets 4 and 5 (Appendix A, 390-33 to 390-35) be improved to ensure that applicants evaluate and document the conditions of existing structures and practices including manure stacks, short and long term manure storage, animal lots and feed storage leachate controls, manure transfer systems?
2. Should the method for evaluating manure storage required in Worksheet 4 (Appendix A, 390-33) be modified based on the CNMP and other evaluation approaches?
3. In light of new models for evaluating animal lot runoff, should the BARNY model be replaced, e.g. BERT?
4. Given the changes in the requirements for the feed storage leachate control, including NRCS Standard 629, should the standards in Worksheets 5 (Appendix A, 390-34-35) be updated? What feed storage structures should be subject to the requirements for

5. What technical standards such as NRCS Standard 313 should be applied to the design, construction and operation of the following components of a manure management system: compost pads, digesters, digester substrate storage, manure residual storage, sand settling lanes, water treatment processes (e.g. ISS). Should ATCP 51 include a process for establishing engineering requirements for new manure handling technologies similar to the process used by DATCP to approve new odor control practices?
6. What should be included in a checklist to determine compliance as part of a monitoring program, including the facilities and practices that must be inspected, frequency of inspections, and method of conducting and reporting inspections?
7. Is there a need to address discharge of process wastewater? What practice requirements, if any, should be required?
8. What are the costs to close a livestock facility if it ceases to operate? What are environmental and health risks from the failure to close a non-operating facility? How do the costs and risks increase based on facility size?

Odor Subcommittee

Objective 1 – Odor standard ATCP 51.14: Do the requirements of Odor and Air Emissions, ATCP 51.14, Appendix A and the odor model accurately predict odors based on current research and field experience?

1. Should the odor generation number be higher or lower than the current value for these structures in the production area (Appendix A, Worksheet 2, Chart 2 p. 390-25):
 - A. slatted floor, pork (PGSF),
 - B. alley flush to storage (DBAF)
 - C. long-term waste storage (WSLT) applied to smaller structures
 - D. Should existing odor generation numbers for other structures on Chart 2 be reconsidered?
2. Should new structures or manure management methods not included in Appendix A Worksheet 2, Chart 2, p. 390-25 be assigned an odor generation number e.g. sand separation lanes, sand separation buildings/systems, layers with dry belt system, feed storage areas? Are odors from any newly identified structures or methods similar to an existing manure management method on Chart 2, or should a new odor generation number be created? As an alternative, could a management plan that includes descriptive methods to deal with new odor sources and management practices equal to an odor reduction credit? If new odor sources are identified, consider what, if any, control practices are appropriate.
3. Should the multiplier (reduction credit) be higher or lower than the current value for these odor control practices (Appendix A, Worksheet 2, Chart 3, p. 390-26):
 - A. anaerobic digestion (E1)

- B. chemical or biological additives (E2)
 - C. compost (E3)
 - D. solids separation and reduction (E4)
 - E. aeration (F1)
 - F. geotextile cover (F3)
 - G. natural crust (F5)
 - H. Should multipliers for other practices on Chart 3 be reconsidered?
4. In light of the advances in research and new technologies, what new odor control practices should be added (Appendix A Worksheet 2 Chart 3, p. 390-26)? Consider the air emission control practices under review by the NR 445 animal waste advisory committee which are not included in the odor standard. Are any newly-identified odor control practices similar to an existing practice on Chart 3 in terms of effectiveness, or should a new multiplier be created?
 5. Is it technically justified to continue the exemption from the odor standard for livestock facilities that have all of their livestock structures located at least 2,500 feet from the nearest affected neighbor (ATCP 51.14(2)(c) and Appendix A Worksheet 2, p. 390-22)?
 6. What is the relationship between the requirements of the management plans and the management of odor (Appendix A, Application for Local Approval, Nos. 12 and 13, p. 390-18)? In light of this relationship, is it appropriate from a technical standpoint to award 80 points toward a passing odor score? If not, should the point total be adjusted upward or downward? Could other requirements/actions be added to the mandatory plans to justify points awarded (e.g. specific requirements for odor control related to feed storage, mortality management, or field application of manure)?
 7. What is the relationship between the requirements for an optional odor management plan and the management of odor (Appendix A, Application for Local Approval, No. 14, p. 390-18)? In light of this relationship, is it appropriate from a technical standpoint to award 20 points toward a passing odor score? If not, should the point total be adjusted upward or downward? Could other requirements/actions be added to the mandatory plans to justify points awarded?
 8. What items should be included in a checklist to determine compliance as part of a monitoring program?

Odor Subcommittee

Objective 2 – Setback Distances ATCP 51.12: Are the property line and road setbacks in Livestock Structures; Location on Property, ATCP 51.12 adequate bearing in mind impacts to adjacent neighbors, public health and other planning and zoning considerations? (See Table 1 below). If you find the setbacks are not adequate, what recommendations would you make to address the shortcomings? The Engineering Subcommittee may provide consultation on these issues.

| Table 1 | Existing ATCP 51.12 Setbacks (shaded) | | Are existing setbacks adequate to mitigate the noise, dust, light or other impacts to the following land uses? | | | |
|---|---|---|--|--|--------------------------|---|
| | Property line (feet) | Road (feet) | Single residential structure | High-use building (e.g. school) or cluster of 6 residences | Public areas (e.g. park) | Municipal boundary or non-ag zoned area |
| 1. Animal housing* | 100 ft for <1000 AU 200 ft for >1000AU | 100 ft for <1000 AU 150 ft for >1000AU | | | | |
| a. <1,000 AU | | | | | | |
| b. 1000 – 5000 AU | | | | | | |
| c. >5,000 AU | | | | | | |
| 2. Animal Lot* | 100 ft for <1000 AU 200 ft for >1000AU | 100 ft for <1000 AU 150 ft for >1000AU | | | | |
| a. < 1/2 acre | | | | | | |
| b. > 1/2 acre | | | | | | |
| 3. Milking parlor | 100 ft for <1000 AU 200 ft for >1000AU | 100 ft for <1000 AU 150 ft for >1000AU | | | | |
| 4. Feed storage | 100 ft for <1000 AU 200 ft for >1000AU | 100 ft for <1000 AU 150 ft for >1000AU | | | | |
| a. < 2 acres | | | | | | |
| b. > 2 acres | | | | | | |
| 5. Manure Storage* | 350 ft | 350 ft | | | | |
| a. < 4 acres | | | | | | |
| b. > 4 acres | | | | | | |
| c. Composting pad | | | | | | |
| * rule has provisions for odor control practices for these structures | | | | | | |