Livestock Siting Technical Expert Committee
Engineering Subcommittee
Meeting Notes October 12, 2010

Attendance: All engineering subcommittee members attended except John Ramsden. The meeting was called to order at 9:10 am. and adjourned at 2:30 pm.

1. **Review assignment questions and discuss progress**. Questions available at: http://www.datcp.state.wi.us/arm/agriculture/land-water/livestock_siting/technical_expert_committee.jsp

The committee reviewed the conclusions reached at the last meeting. All agreed the notes reflected the intent of the subcommittee though refinement would continue until the recommendations are forwarded to the full technical committee.

2. **Existing manure storage evaluation**:

The subcommittee discussed the potential duplication of Siting worksheets with other evaluations. In addition to the recommendations on storage evaluations made at the previous meeting, the group recommends the Department consider the use of a current NRCS CNMP storage evaluation as a substitute for completion of worksheet 4.

3. **Finalize discussion on feedlot rating models**:

Unlike BARNY the BERT model is not responsive to the width of the buffer area entered by the user, rather it relies on answering if runoff contacts the buffer in "sheet flow" (laminar conditions). The subcommittee concluded that for the purposes of Siting, BERT would need to be augmented with directions on how to make this determination, preferably within the model itself as a subroutine in the spreadsheet using standard hydraulic determinations. Consequently, the final recommendation of the subcommittee is to replace the outdated BARNY model but only at such time the BERT model can be modified such that it is a stand-alone tool suitable for the users of the Siting worksheets. The subcommittee suggested DATCP work with NRCS to determine if these changes can be made. If this can be accomplished within the timetable of any ATCP 51 revisions, the group recommends BERT be adopted. Alternately BARNY will need to be retained until a suitable replacement is adopted.

4. **Discuss facility closure procedures and costs**:

John Roach described a typical "Shutdown Plan" for a bankrupt dairy and shared a sample plan that his firm developed for a facility in Ohio. John explained there are mechanisms to assign financial responsibility for a bankrupt operation including the disposition of the manure storage facilities. Others on the subcommittee observed emergency pumping of storage facilities may be required and paid for before the court has assigned a responsible party. It was also acknowledged that environmental damages caused by spills or leakage could fall outside of the financial responsibility of a secured party and outside of the coverage of liability insurance. The group agreed financial responsibility for closures, spills and emergency pumping was outside of the scope of our charge and the expertise of most of the subcommittee. If this complicated subject is to be pursued by the Department, John agreed to offer his expertise.

The subcommittee discussed the cost of manure storage facility closure and agreed it is not practical to cite an average cost representing the wide range of conditions that are likely to be encountered. They did conclude costs and risks will be proportional to facility size and costs for complete closure, if necessary, will likely exceed the initial installation cost. Factors that determine costs of closure include:

-Alternate uses. (Many storage facilities are likely to be redeployed for manure storage or other waste storage.)
-Size of storage facility.
-Solids remaining in the storage that can't be removed with conventional pumping equipment.
-Remediation of any leakage and removal of any contaminated soil.
-Design of system including liner type.
-Need and availability of material to fill any excavation (this is a big variable since the material taken from a storage excavation during construction is often used for fill under buildings and replacement fill can be very costly).
- The NRCS Standard for manure storage abandonment should be used.

The following comments were made concerning other environmental and health risks associated with closures:

-Abandoned earthen feedlots can pose an environmental hazard. After abandonment, soil structure is restored, increasing infiltration and leaching of nitrate. Proper abandonment needs to include the removal of organics and planting crops to extract surplus nitrogen.
-Fly and vermin control can be a significant problem with abandoned facilities and could be a nuisance and vectors for disease.

5. **Discuss compliance monitoring and checklists**:

There was general agreement compliance monitoring is important to ensure continued management of practices and to assist in evaluation of the functional condition of practices. The group also agreed checklists and other tools would be helpful to have available for permit administrators and could encourage effective and consistent administration. Even 'hard' engineered practices have a finite lifespan that should be evaluated at an interval appropriate to their life-span.

In pursuing compliance, duplication should be avoided and many operations may already have compliance assurance. CAFOs, for example, submit compliance reports and have regular reviews that should suffice for all but odor management.

The subcommittee pointed out that resources and expertise to conduct compliance monitoring is often limited, therefore, any compliance mechanisms need to fit the available resources. To this end the group recognized the value of self-certification along with periodic review by an administering authority. Any checklists need to be specific to either the producer, if self certifying, or regulatory authority if a compliance review. The draft checklist was briefly discussed at the meeting but the subcommittee did not provide detailed comments.

6. **Discuss applicable standards for ancillary manure handling practices**:
When new technologies such as sand channels are first adopted there may be uncertainty as to which standards apply. In some cases standards may not exist to adequately guide the design or implementation of a best management practice. The subcommittee felt that most new technologies will fit into existing standards but at the onset it may require an interpretation by DATCP technical staff to guide program implementation until standards or rules are revised. The subcommittee recommends the Department seek the assistance of the Standards Oversight Council (SOC) for making controversial interpretations and for initiating any standard revision or development that may be needed. The subcommittee concurred that the existing mechanisms to assign, revise and develop technical standards for technologies related to manure storage, feedlot runoff, and feed storage are adequate and a unique process, in ATCP 51, is not necessary.

In response to the listed practices in question 5, the subcommittee responds:

-Compost pads - NRCS 313 or NR 500.
-Anaerobic digesters - NRCS 313
-Digester substrate storage – NRCS 313 or NR Industrial waste codes such as NR 213
-Manure residual storage- NRCS 313
-Sand settling lanes- NRCS 634
-Waste treatment processes – Specific to system components; 313 or 634 for most.

7. Discuss **report format and process**
Future meetings and the development of the report were discussed.

8. Meeting adjourned at 2:30 pm.
The next meeting of the full committee will be on 11 November 2010 at 9:00 am at the Department of Agriculture, Trade and Consumer Protection building (2811 Agriculture Drive), Room 106 (Board Room). An Odor Subcommittee meeting on 19 October is optional for Engineering Subcommittee members who are interested in attending or calling in.