Record Keeping for Medium/Small Animal Feeding Operations

Medium and Small Animal Feeding Operations (AFO) that hold a permit* from the Nebraska Department of Environmental Quality (NDEQ) must keep records as specified in Title 130, “Livestock Waste Control Regulations,” Chapter 12, for a period of 5 years. The language in Title 130 states:

001 All permittees and all recipients of construction approvals are required to have routine inspections conducted of the production area, irrigation distribution system, and land application areas as follows:

001.01 Weekly inspections at the production area of all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water to the facilities;

001.02 Daily inspection at the production area of water lines, including drinking water or cooling water lines;

001.03 Daily monitoring and recording of any precipitation events;

001.04 Weekly inspections at the production area of the manure, litter, and process wastewater impoundments. An inspection record shall note the level in liquid impoundments as indicated by the depth marker;

001.05 Inspection prior to each operation of the irrigation distribution system and the water source protection equipment identified in Chapter 10 to ensure that the system and equipment operate as intended. The system shall be monitored while in use to insure the system operates as intended; and

001.06 Inspection at least once a year to determine the sludge and sediment accumulation level in liquid impoundments.

001.07 Maintain records of the above described inspections at the operation for a period of five years.
The following is further explanation of this record keeping and required inspections:

- **Daily inspections of water lines, including drinking water and cooling water lines.** Check for obvious water flow on hard surfaces and wet areas in soil.

- **Daily recording of precipitation events.** Document the amount of rain or snow received, while taking the readings at about the same time each day. A rain gauge on site will provide the best record of precipitation. Information from a weather recording station provides general area data, but not the site-specific data necessary.

- **Weekly inspections of diversions and other devices that channel contaminated storm water to the holding pond, storage pit, or lagoon.** Check for plugged pipes, obstructions and debris in the diversions (i.e., tree branches), excessive soil erosion, and animal burrows.

- **Weekly inspections of the holding ponds, storage pits, underfloor pits, lagoons and other liquid impoundments.** Check for any excessive erosion or animal damage to the structures. Record the level of the liquids in the waste control structure as indicated by the staff gauge or depth marker.

A staff gauge or depth marker is required for all storage or treatment livestock waste control facility (Title 130, Chapter 8, 008). It must contain depth marks that can be easily read and are clearly marked in at least one-foot increments. In addition, the following must be clearly marked:

- For structures receiving runoff such as open lot AFOs:
  - The freeboard level. For earthen structures, the freeboard is 1.5’ below the top of the structure. For uncovered vertical walled structures, the freeboard is 1.0’ below the top, and for covered vertical walled structures, the freeboard is 6” below the top of the structure.
  - The must pump level. This level marks the storage to contain all precipitation and runoff from a 25-year, 24-hour storm. Land application is to be done on dewatering days anytime storage is above this level.
  - The winter pumpdown level. This level marks the storage needed to contain all livestock through the winter months when land application may not be possible. This level must be reached prior to the start of winter. It is suggested that this level be reached by November 15. This may also be the same as the sludge storage level.

- For structures that do not receive runoff but contain the wastes and any direct precipitation, such as a storage pit:
  - The freeboard level.
  - The winter pumpdown level or minimum storage level. A storage pit is required to contain 180 days of storage, or the minimum storage period. This must be available prior to the winter months. This may also be the same as the sludge storage level.

- For lagoons:
  - The freeboard level.
  - The minimum treatment level. This is the amount of liquid needed to maintain proper lagoon function. This volume is above any sludge storage level.
  - The sludge storage level. Although this level is below the minimum treatment level and not observable, this level must be known. Instead of a mark on the staff gauge
or depth marker, record this level on the record keeping form for reference. Sludge will need to be removed if accumulation is above this level.

- Annually check on the sludge and sediment level. The best time to check is usually at the time the structure is lowered to the winter pumpdown level. The sludge level may be visually observed at that time or it may be necessary to probe the structure to determine the sludge level. Lagoons will probably require probing to determine their sludge level.

- Inspection is required of the irrigation system and any water source protection equipment prior to each use of the irrigation system. The water source protection equipment should be checked annually to ensure the equipment operates as intended. The irrigation system must also be monitored while in use.

- The Department suggests that a record be made of when and where wastes were applied and approximately how much was applied on each land application site. Analysis of the wastes and the soil should also be conducted to determine how much to apply to meet the agronomic needs of the crop.

- The approved nutrient management plan that was submitted as part of your application for a permit may include additional record keeping items (i.e., actual amount of N and P applied to each field). Please read through your nutrient management plan to determine if any additional records must be kept.

- You must maintain all waste control structures and equipment in proper working condition. Weed growth that prevents or limits inspections must be routinely removed. Trees and shrubs must not be allowed to grow on the structures. Animals must not be allowed to come in contact with the structure’s liner. If animals are used to control vegetation growth on the berms and dikes, routine inspections must be conducted to ensure no damage to the structures.

- Any deficiencies found must be corrected as soon as possible. If corrections cannot be made within 30 days, an explanation of the factors preventing immediate correction must be included with the documentation of the deficiency.

- Any discharge of livestock wastes must be reported to the NDEQ within 24 hours of the event. A written report of the discharge must be submitted to the NDEQ with 5 days of the event.

- The inspections and other activities as described above must be documented to show compliance. Please develop a method for recording inspections and observations that works best for your operation. A nutrient management record keeping calendar has been produced by the University of Nebraska Extension that the AFO can use for recording. It is available from UNL Extension or NDEQ. The NDEQ has also developed some tables and spreadsheets that the AFO can use, or use as a guide in developing its own forms, to document the above.

*Permit means any construction approval, operating permit or construction and operating permit. A medium or small AFO that also holds a National Pollutant Discharge Elimination System (NPDES) permit is considered a CAFO and must implement additional record keeping as required in Title 130, Chapter 12, 004.