



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

RE: Comments on Callaway Farrowing, LLC Operating Permit Application Deficiencies

Thank you for your comments and for those you submitted on behalf of the Friends of Responsible Agriculture, concerning the proposed permit for the Callaway Farrowing, LLC Concentrated Animal Feeding Operation (CAFO). The application is for a new operating permit for the operation of a Class IB swine CAFO. This letter contains the Missouri Department of Natural Resources' (Department) response to comments received.

Below are comments or a summary of comments received during the thirty day neighbor comment period and the Department's responses to your comments. Also included are the Department's responses to the comments by Kathy J. Martin, PE.

Please note that the Clean Water Commission regulations expressly state that the Department does not have jurisdiction to address comments regarding "nonwater quality related items" [10 CSR 20-6.020(1)(H)].

Comment 1: Any application for this site should be denied for all time. The MDNR should not approve the application based on multiple water features at the site.

Response: The Department reviews all permit applications for compliance with applicable statutes and regulations. If the application does not comply with all statutes and regulations the Department can deny the application, however, if the application is complies with all statutes and regulations, Section 644.051 RSMo. requires the Department to issue the permit.

Callaway Farrowing, LLC has submitted a plan for the draining of ponds at the proposed site prior to construction of confinement buildings. Once the ponds are removed, setback distances to these former water features are not applicable. The U.S. Army Corps of Engineers evaluated the site and determined its permitting requirements did not apply (which are commonly called "404 permits" in reference to Section 404 of the Clean Water Act).

If one acre or more of land is disturbed during site preparation and construction of buildings a land disturbance permit is required (which is a separate permit action that is completed by the applicant through an electronic permitting process). The land disturbance permit requires the applicant to develop a Stormwater Pollution Prevention Plan (SWPPP) identifying Best Management Practices (BMP) for sediment control and dewatering activities.

The proposed operation meets the location requirements in 10 CSR 20-8.300(5)(B).

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Comment 2: The permit application is incomplete.

Response: See the enclosed responses to Ms. Kathy J. Martin PE.

Comment 3: The application has substantial technical deficiencies

Response: See the enclosed responses to Ms. Kathy J. Martin PE.

Comment 4: MDNR should require a site-specific permit.

Animal feeding operations (AFO) are exempt from 10 CSR 20-6.015 because their requirements are contained in 10 CSR 20-6.300, which requires all Class I CAFOs to obtain operating permit coverage. Callaway Farrowing, LLC has applied for the State No Discharge MOGS10000 general permit. This general permit is written with conditions and requirements to cover a wide range of waste management systems and operating conditions. The Department has evaluated the application and determined this general permit is applicable to the proposed operation. If the Department determines that a NPDES general or individual permit is necessary to ensure protection of the waters of the state, the operation can be required to apply for one.

The proposed CAFO has submitted documentation that the operation has been designed in accordance with the Manure Design Storage Regulations in 10 CSR 20-8.300 which requires CAFOs to be no discharge. The no discharge requirement is the most restrictive effluent limitation that can be placed on a permitted facility and is protective of water quality standards.

10 CSR 20-8.300 requires a geohydrological evaluation to be conducted for the construction of an earthen storage structure due to the collapse potential of the liner. Callaway Farrowing, LLC is not proposing to construct an earthen storage structure. However, based on concerns raised at the public hearing, the Water Protection Program staff asked the Missouri Geological Survey (also housed within the department) to conduct a geohydrological evaluation. This evaluation took place on November 12, 2014 and found the potential to impact groundwater is limited. A copy of the report is enclosed. The report also indicated the presence of a rock-lined had dug well and two small earthen lagoon. The applicant has been informed the well must be plugged according to state regulations and the wastewater and sludge in the lagoons must be properly disposed of.

Comment 4a: MDNR should require groundwater monitoring and other monitoring requirements in the site specific permit.

Response: The MOGS10000 general permit contains a Special Condition that allows the Department to require groundwater monitoring, however, the geohydrological evaluation did not indicate a need for groundwater monitoring. Callaway Farrowing, LLC has met the regulatory requirements of 10 CSR 20-8.300, which requires the facility be designed as no discharge to surface water or groundwater. Areas around confinement buildings and manure storage structures are graded so stormwater is diverted away. Stormwater that comes into contact with manure is considered process wastewater and must be contained within the production area and cannot be discharged. All CAFO permits require weekly inspections of stormwater diversion devices, manure storage structures, and daily inspections of wastewater, drinking water, and cooling water lines that are visible, and annual manure analysis for nutrient content.

Comment 4b: Multiple entities designated the same land application fields in their Nutrient Management Plans (NMP). A general permit is inappropriate here. MDNR should require submittal of the NMP. The state CAFO permit lacks many of the protections of the stricter federal National Pollution Discharge Elimination System (NPDES) permit and the NMP is not incorporated into the state permit. Additionally, application to common fields should be considered common ownership with the Pork Masters facility.

Response: State and federal regulations require all permitted CAFOs to develop and implement a NMP that addresses nine required elements, including manure application on fields under control of the CAFO owner whether they are owned, rented, or leased. Because Callaway Farrowing, LLC is proposed as an export only operation, the land application fields are not required to be included in the CAFOs NMP as this is considered a manure transfer. Regulations require them to provide all recipients of manure a copy of the most recent manure analysis, the Missouri Concentrated Animal Feeding Operation Nutrient Management Technical Standard (NMTS), and to keep records of all manure transfers. These are the only regulatory requirements pertaining to manure transfers.

Callaway Farrowing, LLC has developed a NMP that includes proposed land application fields with planned crops and yields, application rates, and land application setbacks identified on maps. The Department requires submittal of a NMP prior to initial issuance of a MOGS10000 permit. The Department has reviewed the required elements of the Callaway Farrowing, LLC NMP and it meets the regulatory requirements. Compliance with the NMP is reviewed during inspections.

Some fields listed in the Callaway Farrowing LLC NMP are also in the Pork Masters, LLC NMP. Any manure applied to fields that are included in Pork Masters, LLC, or any other permitted CAFO's NMP, must be conducted in accordance with that CAFO's NMP and the NMTS. The amount of nutrients supplied by all manure applications shall not exceed the agronomic rate which is to be calculated each year based on the crop grown, realistic yield goal, current manure analysis, and current soil tests. The CAFO receiving the manure must keep records of the manure applications as required by the NMTS. These records are reviewed during inspections.

The state no-discharge permit contains the same requirements as NPDES permits for production area (except for the allowance of a discharge), land application, manure transfers, mortality management, inspections, recordkeeping, NMP, NMTS, closure of waste storage structures, and submittal of an annual report.

NPDES permits do incorporate portions of the operations NMP into the permit as terms of the NMP. These terms include land application areas under control of the CAFO owner, spreadable acres, crops grown, yields, phosphorous loss assessment, and nitrogen or phosphorous based application. Callaway Farrowing, LLC is proposed as an export only operation and this information is not required to be in their NMP, therefore, no portion of their NMP would be incorporated into a NPDES permit. Changes to the NMP that do not result in significant changes the terms of the NMP in the permit do not require a permit modification or a Public Notice.

Callaway Farrowing, LLC and Pork Masters Inc. CAFOs have different ownership which requires separate operating permits.

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Comment 4c: Prior agreement between Pork Masters and neighbors. There is no proof of the CAFO's ability to own, lease, or use the land. No warrantee deed or lease has been recorded.

Response: There are no state or federal regulations for separation distance between animal feeding operations. The agreement signed between Pork Masters Inc. and surrounding neighbors is a civil agreement which does not fall within the scope of this permit action and is outside the jurisdiction of the Clean Water Commission, but may be pursued through other venues.

The Department issues permits that authorize the operation of a facility to those that build, use or operate a point source in accordance with 10 CSR20-6.010 (1)(A). Many industrial facilities, which include CAFOs, do not own the property from which they operate. In these instances, permits are issued to the owner of the operation rather than the owner of property. All permits issued by the Department are required to list a "Continuing Authority", which is the person or entity responsible for environmental matters at the facility if it ceases operation.

Comment 4d: There are impaired water bodies in the area. Stinson Creek in Callaway County is on MDNR's 2010 impaired water bodies list for Total Maximum Daily Loads (TMDL).

Response: CAFO permits list manure storage structures, not land application areas as permitted features. The proposed CAFO manure storage structures are in the Richland Creek hydrologic unit. Richland Creek is not on the impaired waters list and there is no TMDL established. Some of the proposed land application fields are in the Stinson Creek hydrologic unit. As an export only operation, no land application areas are considered as part of this permitting action. When permits are issued to facilities with permitted features in a hydrologic unit where there is an approved TMDL, the effluents limits in the permits for the pollutants listed in the TMDL are at least as protective as the effluent limits required by the TMDL. The no discharge effluent limitation that is required for CAFOs is the most restrictive effluent limitation that can be required.

Comment 5 and 5a: Problems with Notice. The timeframe of the Public Comment Period was, and is unclear, resulting in an ineffective Public Participation Process.

Response: The neighbor notification must contain specific information and be sent to all specified parties as outlined in Section 640.715.1 RSMo. This statute also states that "The Department shall accept written comments for thirty days after the receipt of application for such permit." Because the parties receiving the notification may not know when or if an application has been submitted, they have a minimum of thirty days to submit written comments as required by statute. The Department will accept written comments that are received any time prior to the end comment period as defined by statutes, including those submitted prior to receipt of the application. While the Department does accept comments from the general public, the neighbor notification process is not a Public Notice.

The initial notification sent May 13, 2014 initiated the neighbor notification process and comment period. This notification was not submitted to the Department and therefore, not reviewed for compliance with the statutes. A second notification was sent on July 14, 2014 to inform the required parties of a change of ownership for the proposed operation as required by statutes. This notification was submitted to the Department as part of the July 31, 2014 operating permit application and upon review did not comply with the statutory requirements. The operation was required to send a third notification to all required parties to fulfill the statutory requirements. This notification was sent August 7, 2014.

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All three notifications stated that the Department would accept written comments for thirty days from the date of the letter. Because the first notification stated this, that portion of the statutory requirement was met, and this information was not required to be included in subsequent notifications as the comment had already been initiated. Due to public interest, the department decided the comment period would end thirty days from the date the application was complete which was August 22, 2014. The comment period officially ended on September 20, 2014. The Department has accepted and reviewed all written comments that were received ranging in dates from May 27, 2014 to September 29, 2014. The department also accepted verbal and written comments at the November 6 public hearing.

Comments 6 and 7: MDNR is obligated to hold a hearing to determine the impact of proposed permitted activities on water quality. We request MDNR hold a hearing on the permit application.

Response: The Department conducted a Public Hearing on November 6, 2014.

Comment 8: MDNR should take into account the substantial public opposition to the facility.

Response: The Department reviews and considers the content of all comments. While the Department receipt of a large number of comments opposed to issuing the permit, Section 644.051, RSMo requires that permits be reviewed, and issued or denied based upon compliance with state and federal statutes and regulations.

Comment 8a: The adverse impact of out-of-state corporate farming on local agriculture.

Response: This issue does not fall within the scope of this permit action and is outside the jurisdiction of the Clean Water Commission, but may be pursued through other venues.

Comment 8b: The health of citizens in Callaway County.

Response: The CWC has developed Water Quality Standards in 10 CSR 20-7.031. This regulation establishes ambient water quality standards for those water contaminants for the protection of groundwater and surface water for the purposes of aquatic life protection, human health protection-fish consumption, drinking water supply, irrigation, livestock and wildlife watering, groundwater, and whole body and secondary contact recreation. The CWC has also developed regulations regarding the design of manure storage structures and permit requirements for the operation of CAFOs that established a no-discharge effluent limitation. Health issues not related to water quality do not fall within the scope of this permit action and are outside the jurisdiction of the CWC.

Comment 8c: The effect on air and water quality in Callaway County.

Response: The proposed CAFO has complied with the minimum 2000 foot buffer distance between the nearest confinement building or wastewater storage structure, and existing public building or occupied residence as required under Section 640.710 RSMo. This is the only state law or regulation regarding odor or air pollution for Class IB CAFOs that falls within the scope of this permit action and the jurisdiction of the Clean Water Commission. The Department's Air Pollution Control Program regulates odor. However, with respect to CAFOs, odor regulations apply only to Class IA facilities.

Response: CAFOs in Missouri are required to be designed, constructed, operated and maintained as no discharge facilities. They must be designed by a Professional Engineer registered in the state of Missouri in accordance with the Clean Water Commission's CAFO design regulations for the protection of groundwater and surface water, and constructed according to those design plans. The permit Callaway Farrowing, LLC has applied for does not allow discharges to waters of the state for any reason. The swine and manure are to be kept in the confinement buildings and not exposed to precipitation or stormwater runoff. Regulations require the operation to conduct weekly inspections of confinement buildings and manure storage structures for structural integrity and leaks. The proposed facility meets the regulatory setback distances to features such as streams, ponds, wetlands, and wells. The no discharge requirement is the most restrictive effluent limitation that can be placed on a permitted facility and is protective of water quality.

Comment 8d: Property devaluation within Callaway County.

Response: The Department acknowledges the community's concern; however, this issue does not fall within the scope of this permit action and is outside the jurisdiction of the Clean Water Commission.

Comments 8d: Loss of community values including reciprocity, respect, honesty, and shared identity.

Response: The Department acknowledges the community's concern; however, this issue does not fall within the scope of this permit action and is outside the jurisdiction of the Clean Water Commission.

Comments 8d: The potential adverse impact on the quality of life and enjoyment of residents in Callaway County and surrounding areas.

Response: The Department acknowledges the community's concern; however, this issue does not fall within the scope of this permit action and is outside the jurisdiction of the Clean Water Commission.

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Below are the comments or summary of comments and the Department's responses to the comments by Ms. Kathy Martin, PE that were submitted in addition to your comments.

Comment 1a: The applicant engineer chose to use the Virginia Extension publications on mortality estimates rather than Missouri guidance. State law requires that livestock composters be designed using Missouri Extension guidance documents. Several guidance documents and the Missouri dead animal disposal Statute Chapter 269 were listed.

Response: University of Missouri (MU) Extension and other guidance documents are published for informational and educational purposes. Facilities are not required to follow or use these guidance documents unless it is incorporated in statutes, regulations or permits. There is no requirement in 10 CSR 20-6.300 or 10 CSR 20-8.300, or in the Missouri Clean Water Law in Chapters RSMo 640, or 644 for mortality composters to be designed in accordance with University of Missouri Extension's guidance for composting animal mortalities. Chapter 269 RSMo. is a Department of Agriculture Statute and is outside the jurisdiction of this permit and the Clean Water Commission.

Comment 1b: Applicant underestimated typical mortality rates for sow facilities. According to WQ351 the range of expected death loss for sows is 6 to 8% and for nursery swine is 22 to 26%. The applicant chose to design with much smaller death rates of 2 to 5% for sows and no values for piglet or nursery swine

Response: There is no range or minimum level that is required by regulations to be used for estimating mortality rates of confined animals. If the actual mortality rate is higher than the rate estimated in the application, the CAFO can expand the size of the composter or implement another approved method of mortality management.

Comment 1c: The applicant chose a maximum height of 8 feet, but Missouri Extension WQ351 guidance for compost sizing recommends compost depth of 6 feet. By allowing an extra 2 feet of compost per bin, the applicant underestimated the number of bins needed to properly compost the expected mortality

Response: MU guidance document WQ351 is not incorporated into the Missouri Clean Water Law, CAFO regulations, or permits. Therefore, operations are not required to follow the recommendations of that guidance document. If the proposed composter is undersized or does not provide adequate decomposition of mortalities, it should be redesigned or another approved method of mortality management can be used.

Comment 1d: Failure to prepare a catastrophic mortality disposal plan. The applicant did not mention either of the two main epidemics associated with sow facilities, PRSS and PEDv, both of which have very high death loss in affected animals. In order to protect other hog farmers in the region, it is imperative that sow facility operators provide knowledge of the two main causes of large-scale death loss at their type of facilities and prepare in advance a suitable disposal and biosecurity plan to insure that the viruses and other pathogens are properly handled, including mortality disposal and the segregation of all contaminated manure wastes and wastewaters.

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Response: CAFOs are required to address proper management of mortalities in their Nutrient Management Plan (NMP). They are not to be disposed of in a liquid manure, stormwater, or process wastewater storage or treatment system that is not specifically designed to treat animals (10 CSR 20-6.300(5)(B)). The applicant identified composting as their method of mortality management which meets this requirement.

The development of a catastrophic mortality disposal plan or identifying potential causes for catastrophic mortalities is not required by state or federal regulations. Operations may dispose of catastrophic mortalities by composting, incinerating, rendering, or landfilling without prior approval. If the operation wishes to use burial as a method to dispose of catastrophic mortalities, the department and the Missouri Department of Agriculture must be notified prior to burial and burial must be conducted in accordance with Missouri Department of Agriculture statutes in Chapter 269 RSMo. There is also no state or federal regulations requiring the development of a biosecurity plan.

Comment 2a: Wash water estimates for various barns. The applicant under estimated the amount of wash water to be used during clean out of buildings. Using Table 7 of the Pork Checkoff Research paper different values for the amount of wash water were calculated.

Response: CAFOs are required to account for extraneous water usage in the annual amount of wastewater produced. However, there is no regulatory requirement for the operation to use specific estimates or calculations for the amount of extraneous water used.

Comment 2b: When calculating the storage capacity of each pit under each barn, the engineer uses the total depth of the pit (to the slatted floor) and did not consider freeboard requirements to prevent over topping, air space requirements for pit fan clearance, or pit volume taken up by sludge buildup due to incomplete emptying of pits during pump out. This comment is associated with Figure 1.

Response: 10 CSR 20-8.300 (8)(B) states that an allowance of one foot should be provided at the top of covered structures for agitation and ventilation. The isolation building is designed with a pit depth of 8 feet and the manure storage volume was calculated with a depth of 7 feet. The gestation building is designed with a pit depth of 10 feet and the manure storage volume was calculated with a depth of 8.33 feet. Manure from the farrowing building will be transferred to the gestation building. 10 CSR 20-8.300(6)(B)2 requires the minimum design storage period for all manure storage structures to be 180 days. Both confinement buildings meet this requirement.

Comment 2c: The manure volume estimates for gestation sows is based on an average weight of 400 pounds per animal but the estimates for farrowing sows is based on an average weight of 375 pounds. By choosing the smallest farrowing sow size in Table 6 of MWPS-18, the applicant may have underestimated the volume of manure generated in the farrowing barn by larger sows. This manure volume is then transferred to final storage to the gestation barn.

Response: There are no regulatory requirements that specify the size of animal or manure production values to be used when calculating the estimated amount of manure produced. The department has calculated the amount of manure produced using the maximum animal weights in Table 6 form MWPS-18 Section 1, Second Edition and added in the wash water estimates calculated by Ms. Martin and the manure storage for the isolation and gestation buildings meet the minimum 180 day storage requirement.

Comment 3: Contents of Engineering Report not complete. The calculations cover sheet is titled “Eichelberger Farms Hog Expansion”. This is a new facility, not an expansion. Numerous documents are in the permit application related to the engineering are labeled as Eichelberger Farms and not Callaway Farrowing, LLC.

According to 10 CSR 20-8.300(3)(A)(1)(F) Technical information and design criteria should include the following which are either missing from the report or deficient in their presentation (Comment 3a-3d).

Response: House Bill (HB) 28, which became effective on August 28, 2013 contained provisions that changed construction permitting requirements. In accordance with Chapter 644 RSMo., construction permits are required only for the construction of an earthen storage structure to hold, convey, contain, store, or treat domestic, agricultural, or industrial process wastewater. Chapter 644 RSMo. also requires the construction of all other point source systems designed to hold, convey, contain, store, or treat domestic, agricultural, or industrial process waste to be designed by a professional engineer registered in Missouri in accordance with design regulations and constructed according to those design plans.

These statute changes override existing regulations. In response to the statutory changes the Department has implemented an interim process for CAFO operating permit applications when a construction permit is not required. This process outlines documents that are required to be submitted with an operating permit application. As a result, only certain portions of the construction permit application documents identified in 10 CSR 20-8.300(3) continue to be required with an operating permit application. Callaway Farrowing, LLC is not proposing to construct an earthen storage basin so no construction permit is required.

A revised cover sheet submitted on August 19, 2014 with the facility name and engineer seal, and certified the project was designed in accordance with Missouri CAFO regulations.

Comment 3a: (F)(II) “a detailed explanation of the process by which manure is deposited, handled, managed, and transferred within the operation.” The permit application only contains a brief project summary. There is no detailed explanation of any of the processes, especially the transfer of waste from the farrowing barn to the gestation barn and all precaution taken to prevent leakage from the pipes and appurtenances associated with that transfer. There is no discussion of how the various pits will be monitored for available storage, prevention of crusts and scum on manure wastewater surface, and maintenance of the required air space for proper pit fan ventilation. There is no discussion of how the various pits will be agitated and pumped to maximize the removal of wastes and wastewaters during pump out.

Of specific importance is the lack of information about the biosecurity and truck decontamination procedures for sow facilities that would prevent the transfer of PEDv to or from the facility via feed trucks, manure handling equipment and other vehicular traffic at the facility.

Response: The interim operating permit process requires a narrative project summary to be submitted with the application. The project summary submitted with the application meets this requirement. All CAFO operating permits contain requirements for the operation to conduct daily inspections of water, wastewater, and cooling water lines that can be visually inspected. Permits also require weekly inspections of wastewater structures including the liquid level in the storage structure. Records of these inspections must be kept. Pipelines must be designed by a professional engineer in accordance with 10 CSR 20-8.300(11) and constructed according to those plans.

As previously stated, there is no state or federal regulation requiring the development of a biosecurity plan.

Comment 3b: (F)(V) “depth and volume tables on at least one foot increments for all manure storage basins with design operating depths clearly identified.” The engineering drawings did not include a depth and volume table for any of the pit storage under the various barns. In particular there was insufficient narrative description of what depth would trigger the transfer of manure and wastewater from the farrowing barn to the gestation barn to prevent overflow of either or both barns.

Response: The interim operating permit process does not require the depth and volume tables on at least one foot increments to be submitted with an operating permit application. On the Calculation of Manure Production and Storage” page (page 23 of the application) it states that the farrowing building will be drained to the gestation building monthly at each turn of animals.

Comment 3c: (F)(VI) “collection, treatment and disposal of all domestic wastewater flows associated with the operation.” The permit application did not contain information about the volume and disposal of domestic waste and wastewaters associated with shower in/shower out facility, on-site uniform washing machines, domestic sewage, and any other decontamination wash water. It should be noted that Mexico silt loam soils are “unsuitable as a site for conventional septic tank absorption fields because of the restricted permeability and the wetness.

Response: The interim operating permit process does not require the collection, treatment and disposal of all domestic wastewater flows to be submitted with an operating permit application. On-site disposal of domestic sewage is regulated by the Missouri Department of Health.

Comment 3d: (G) “Soils report/soils information ... soils information shall include soils series name, soil texture, soil permeability, and water holding capacity...any soil boring logs shall also be included in the report. The permit application contained a map that appears to identify soil types at the production area but none of the related information was included. No boring logs were included in the application. The Callaway County Soil Survey shows the Mexico soils to be severe for building site development due to shrink/swell and wetness. The engineering drawing does contain a perimeter tile but no explanation on how the tile will remove excess wetness from the footings and foundation.

Response: The interim operating permit process does not require the soils report/soils information to be submitted with an operating permit application. Soil borings are not required for the construction of tanks and pit in accordance with 10 CSR 20-8.300(8). This regulation also outlines the requirements for footing drains and perimeter tiling when groundwater table is present.

Proposed sites are to be evaluated for physical characteristics and suitability of the soil. The information in published Soil Surveys can be used for this purpose. While the Soil Survey does give suitability ratings based on characteristics of each soil type for various land uses, it does not prohibit the soil from being used for the intended purpose.

Comment 3e: (H) “An operation and maintenance plan shall be provided to explain the key operating procedures. At a minimum, the plan shall address operation and maintenance of mechanical equipment.” The permit application did not contain an operation and maintenance plan.

Response: The interim operating permit process does not require an operation and maintenance plan to be submitted with an operating permit application.

Comment 4: According to 10 CSR 20-8.300(3)(A)(2), the general lay out drawings should include the following items that were absent from the documents in the permit application.

Response: See response to Comment 3.

Comment 4a: “Each drawing or map must easily readable and include a visual scale, a north directional arrow, a fixed geographic reference point, and the date the drawing or map was completed.” The topographic map, soils map, and aerial map all lack these basic identifiers.

Response: These items are not required on maps with an operating permit application. The maps submitted with the application meet the map requirements of the interim operating permit process.

Comment 4b: (2)(B) “The source of the operation’s water supply and all wells within three hundred feet (300’) of the production area.” There are no maps or drawings in the permit application that identify the facility water well nor is there a map that attempts to show whether there are any water wells within 300 feet of the production area.

Response: The interim operating permit process does not require the source of the operation’s water supply to be submitted with an operating permit application. Callaway Farrowing, LLC has submitted a map showing setback distances to features outlined in 10 CSR 20.8.300(5)(B).

Comment 4c: (2)(C) “The locations of surface water features within the boundaries or immediately adjacent to the production area.” The topographic map included in the permit application indicates that several obvious surface water features, but the applicant has failed to show where those water features flow to and the names of creeks down gradient. The guilt and isolation barn appears to be located directly over a large pond. No explanation provided. This comment is associated with Figures 2, 3, and 4.

Response: The topographic map submitted with the permit application does show ponds on the site and indicates the direction of water flow. Callaway Farrowing, LLC has submitted a plan for the draining and grading of ponds at the proposed site prior to construction of confinement buildings. If one acre or more is disturbed during site preparation and construction of buildings a land disturbance permit is required. This permit requires a Stormwater Pollution Prevention Plan (SWPPP) to be developed that identifies Best Management Practices (BMP) for sediment control and dewatering activities. Down gradient creeks are not required to be identified in the application as they are determined by the permit writer during permit review.

Comment Figure 5: Google Earth image of flooding northeast of the proposed site in May 2013.

Response: The proposed building locations meet the requirement in 10 CSR 20-8.300(5) that all confinement buildings and manure storage structures are to be protected from inundation or damage due to a 100 year flood.

Comment 5: Request for “grant of modification”. No narrative explanation is provided in the permit application for the inclusion of an apparent request for “grant of modifications” that is apparently trying to ascertain that the design will be “as protective of the groundwater, surface water and the structural integrity”. This comment is associated with Figure 7.

Response: The engineer that designed this operation submitted sealed documentation that the project was designed in accordance with Missouri CAFO design regulations. There has been no request for modification or variance from 10 CSR 20-8.300 submitted.

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Conclusion

The Department has carefully reviewed the Callaway Farrowing, LLC application for a new permit along with the public's comments. The Department is obligated to review each application equally in respect to compliance with regulations set forth by the Clean Water Commission. Based upon this review we have determined that the operating permit application is complete and that the operation meets the requirements as outlined in the State's Clean Water Law. In accordance with Missouri's regulations found in 10 CSR 20-6.300 and 10 CSR 20.8.300, an operating permit will be issued to Callaway Farrowing, LLC.

Thank you for taking the time to become involved in our efforts to protect our environment and preserve our water resources. Your concerns were fully considered as this matter was reviewed. We hope that this letter was valuable in providing answers to your questions, and if you have further questions, please contact Greg Caldwell at (573) 526-1426 or by mail at P.O. Box 176, Jefferson City MO 65102-0176.

Sincerely,

WATER PROTECTION PROGRAM

Chris Wieberg, Chief
Operating Permits Section

CW:gcs

Enclosure

c: Callaway Farrowing, LLC
Northeast Regional Office



Missouri Department Of Natural Resources

Division of Geology and Land Survey
P.O. Box 250
Rolla, Missouri 65402
Phone - 573.368.2161 Fax - 573.368.2111
E-mail - gspgeol@dnr.mo.gov

DATE
11/14/2014
Identification Number
M02715

Miscellaneous Report

TO **Amanda Sappington, Chief, Industrial Permits Unit, WPP**
FROM **Sherri Stoner, RG, Chief, Environmental Assistance Unit, GSP**
SUBJECT **Callaway Farrowing, LLC, Geohydrologic Evaluation**

Location Quadrangle **MILLERSBURG NE**
NE 1/4 Section **16** Township **48 N** Range **10 W** County **CALLAWAY**
Latitude **38** Deg **56** Min **28** Sec North Longitude **92** Deg **2** Min **38** Sec West
Additional Location Information **County Road 227**

Requested by

Previous Reports Not applicable

At the request of the Missouri Department of Natural Resources Water Protection Program, a site visit and geohydrologic evaluation was conducted by the Missouri Geological Survey on November 12, 2014, at the Callaway Farrowing, LLC proposed Confined Animal Feeding Operation (CAFO) to be located in the Northeast ¼ of Section 16, Township 48 North, Range 10 West, near County Road 227, Callaway County, Missouri.

Callaway Farrowing, LLC has proposed to build and operate an approximate 10,000 swine capacity CAFO, to include: one gestation, one farrowing and one isolation/gilt developer building (each with below-building manure concrete storage pits); a compost area; and approximately 1,460 acres for land application of swine wastewater. The geohydrologic evaluation conducted on November 12, 2014, was specific to the location of the three (3) proposed buildings.

Currently, a small brick house, barn and several small outbuildings are located at the site. A rock-lined hand dug well and a subsurface concrete-lined cistern was located adjacent to, and at the north and west side of the house, respectively. Both of the features were full of water. In addition, a small pond was identified approximately 275 feet northwest of the house, and two small earthen lagoons were located approximately 150 feet north-northeast of the house.

Site observations indicate that the surficial materials are composed of a mantle of low permeability modified silty loess overlying approximately 30 to 40 feet of low to moderately permeable clay to silty clay glacial till materials. Isolated areas of higher permeability sand and gravel-sized glacial materials were identified on the eastern portion of the site. Overall, the surficial materials exhibit low vertical permeability.

No bedrock was observed at the site. However, approximately 1,300 feet east of the site, and approximately 30 feet lower in elevation, is an area that recently had the topsoil removed exposing a small area of what appeared to be blocky, low permeability weathered dark shale of Pennsylvanian age. Some well driller logs in the area indicate that Mississippian-age Burlington-Keokuk Limestone is the uppermost bedrock. If this is the case, at least a mantle of low permeability Pennsylvanian-age Cherokee Group bedrock may overlie the higher permeability limestone in the exposed area. The Burlington-Keokuk Limestone is a light gray, coarsely crystalline fossiliferous limestone. This bedrock unit typically has high permeability; however, the thick, low permeability surficial materials have limited the amount of weathering and development of secondary permeability features in the limestone typically resulting in its lower permeability in the area. No sinkholes were observed during the site visit.

Any surface water from the proposed building sites will migrate less than 100 feet north-northeast into an unnamed tributary of Richland Creek, and flow less than 500 feet to a new, approximate 5-acre man-made lake. The unnamed tributary of Richland Creek and Richland Creek downstream of the site was observed to be gaining. Aerial photographs taken in 2012 do not identify the presence of the lake. No springs were observed during the site visit.

The hydrogeologic characteristics of the surficial materials and bedrock, and the gaining stream setting, combine to limit the amount of downward or vertical migration of fluids, subsequently slowing recharge into the subsurface. Therefore, the potential to impact groundwater is limited.

Cc: NERO



11-14-2014
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