



ARKANSAS
Department of Environmental Quality

NOV 13 2013

Robert Cross
President, Ozark Society
PO Box 145
Fayetteville, AR 72702

RE: Response to Comments on Pond Liner for Waste Holding Ponds, C&H Hog Farms
Permit Tracking Number ARG590001, AFIN 51-00164

Dear Mr. Cross,

Thank you for your recent correspondence concerning the C&H Hog Farms, Inc. (C&H Hog Farms) in the vicinity of Mt. Judea, AR. C&H Hog Farms was issued a Concentrated Animal Feeding Operations general permit (ARG590000) on August 03, 2012. The General Permit was developed in accordance with operation and construction requirements listed in 40 CFR 412. We hope the following addresses the questions you have regarding this matter.

The comments made in your letter all relate to the use of 10 States Standards for design of the waste disposal system. The following is an excerpt from APC&EC Reg. 6.202(B):

The basic design criteria for wastewater treatment plants in the State of Arkansas should be based on the latest addition of the "Recommended Standards for Sewage Works," published by the Great Lakes-Upper Mississippi Board of State Sanitary Engineers known as 10 States Standards, with the following modifications. *Exception to these criteria will only be approved by the Department when fully justified.* [emphasis added]

C&H Hog Farms and other similar facilities in the state, such as permits issued under APC&EC Reg. 5, base their waste disposal system designs on the United States Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) National Engineering Handbook Part 651 Agricultural Waste Management Field Handbook (hereinafter the "Field Handbook"). A copy of the Field Handbook can be found on the USDA-NRCS website at the following address:

<http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/water/?&cid=stelprdb1045935>

The Field Handbook was created by the USDA-NRCS specifically for the purpose of being used as a guidance and design manual for agricultural waste management. It is the Department's opinion that use of the Field Handbook is more applicable for animal waste than 10 States Standards and is therefore fully justified as an exception in accordance with APC&EC Reg. 6.202(B). The Department has reviewed the application and believes it complies with the technical standards of the Field Handbook.

The Nutrient Management Plan submitted states (page D-7), "The seepage rate of any compacted liner that will be used will be less than the maximum allowable seepage rate of 5,000 gallons/acre/per day as required by the Arkansas Department of Environmental Quality." The allowable seepage rate of 5,000 gallons per acre per day comes from the Field Handbook, which states:

When credit for a reduction of seepage from manure sealing (described later in the document) is allowed, NRCS guidance considers an acceptable initial seepage rate to be

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5,000 gallons per acre per day. This higher value used for design assumes that manure sealing will result in at least a half order of magnitude reduction in the initial seepage.

Post construction certification of the soils testing showed adequate values of permeability to meet the allowable seepage rate to be protective of groundwater. The results of this soil testing were submitted and are available on the Department's website at the following address:

http://www.adeg.state.ar.us/ftpoot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/ARG590001_QA-QC%20Soil%20Testing%20Results_20130412.pdf

In addition, the University of Arkansas is currently conducting a research study to evaluate the sustainable management of nutrients from the farm. A major task of the study is to assess the impact of farming operations (effluent holding ponds and land application of effluent) on the quality of critical water features on and surrounding the farm including springs, ephemeral streams, creeks and ground water. If the study shows any potential impacts the Department will evaluate the results and permit any recommendations of the University.

Thank you for writing to the Department. If you have any questions concerning this matter or need additional information, please feel free to contact Katherine Yarberry, PE of my staff at (501) 682-0647 or yarberryk@adeq.state.ar.us.

Sincerely,



Ryan Benefield, P.E.
Deputy Director

cc: Electronic Files (ARG590001 AFIN 51-00164)