

*Charles J. Bitting
HC 73, Box 182-A
Marble Falls, Arkansas 72648*

March 19, 2014

Teresa Marks
Director, ADEQ
5301 Northshore Drive
North Little Rock, AR 72118-5317

Dear Director Marks:

I am writing regarding C&H Hog Farm, Inc., ARG590001. I want to thank ADEQ for welcoming comments from citizens on the permit and Nutrient Management Plan for C&H Hog Farm, Inc.

The Nutrient Management Plan (NMP) has recently been modified asking ADEQ to allow for Vac-Tanker spreading of waste from Waste Storage Pond #1 (WSP#1) on fields 7, 8, and 9. As I understand it, the current NMP (DeHaan, Grabs, and Associates, May 2012) allows for use of a pump, pipe, and sprinkler system on these fields, utilizing waste from Waste Storage Pond #2 (WSP#2) as fertilizer. In this letter, I will attempt to keep my comments focused on the issues this modification presents to the management of water quality in the receiving stream of Big Creek, and thence the Buffalo River, While I am trying to keep my comments focused on the changes, I cannot help but notice the many flaws in the NMP. These flaws should have been caught by the ADEQ NPDES permit writer, but apparently were not. This makes me question the entire permit as I can see no evidence of a critical review of the application by ADEQ prior to permit approval.

First, let me say that I do not believe the current NMP meets the minimum requirements of Arkansas Natural Resource Commission (ANRC) Title XXII, or Natural Resource Conservation Service Practice Standard 590. The primary goal of Title XXII is to "maintain the benefits derived from the wise use of poultry litter, commercial fertilizers, and other soil nutrients while avoiding unwanted effects from excess nutrient applications on waters within the State." The rules in Title XXII "provide requirements applicable to nutrient surplus areas, nutrient management plans, and poultry litter management plans. These rules are designed to protect the waters within the State from adverse effects of excess nutrients while allowing for maximum soil fertility and proper plant growth." (Title XXII, Section 2.201.1) Title XXII describes in some detail the requirements of a NMP. Specifically, according to 2.203B(2)(d) the plan must have "individual field maps with marked conservation features, setbacks, buffers, waterways poultry houses or facilities, surface water features, and environmentally sensitive areas such as sink-holes, wells, gullies, tile inlets, etc." The NMP provided by C&H in their original NOI lacks these maps. The NMP provided by C&H in December of 2013 for "Cold Season Waste Applica-

tion” does not have ANY maps. The NMP provided by C&H on February 10, 2014 is almost identical to the original NMP, and has no updated maps either. These maps serve several purposes. They allow the regulators to see that appropriate setbacks have been applied that will attenuate, at least somewhat, the contaminants before they reach the receiving stream, the maps allow neighbors and concerned citizens to see exactly where the producer is planning to spread waste, and provide assurances that sensitive resources are being protected, finally, the maps provide the producer, and employees of the producer a certain knowledge where and when waste can be applied, but more importantly where and when no waste should be applied. The insufficient mapping of these fields is a serious oversight, and the new NMP should be rejected on this basis alone.

General Permit ARG59000 Section 1.5.9.2 requires submission of a NMP with the NOI that meets the requirements of 40 CFR 122 and 412 and has been developed in accordance with NRCS Conservation Practice Standard, Nutrient Management, Code 590 (2011) including the Arkansas Phosphorus Index, 2010 Revision. Code 590 has similar requirements for NMPs. This standard requires identification of sensitive areas and the associated nutrient application restrictions and setbacks. This standard also requires showing the location of nearby residences, or other locations where humans may be present on a regular basis. This standard requires results of approved risk assessment tools for nitrogen, phosphorus, and erosion losses. The standard also requires documentation establishing that the application site presents low risk for phosphorus transport to local water when phosphorus is applied in excess of crop removal. The standard requires a description of the current and/or planned plant production sequence or crop rotation. The standard requires realistic yield goals for the crops. Setbacks for Big Creek, and a couple of other streams were shown on the maps. Property line setbacks, pond setbacks, setbacks from neighboring occupied structures, setbacks for sinkholes, and setbacks for exposed bedrock were not indicated in any of the maps delivered with the NMP. In addition, the crop yields presented in the NMP are not realistic. The NMP calls for 6.5 tons per acre per year to be removed from the fields as hay or pasture. According to the publication “General Traits of Forage Grasses Grown in Arkansas” (University of Arkansas, Division of Agriculture, Research and Extension, FSA2139), common Bermudagrass has a 5.8 ton per acre per year yield potential in Arkansas. The NMP yield potential is 6.5 ton per acre per year. That is 112% higher than the published number. These discrepancies are grounds for denial of the modification, and initiation of a complete open review of the permit, NOI, and NMP.

The General Permit ARG590000 Section 3.2.5.1(a) requires all NMPs submitted for a CAFO to include the outcome of a field-specific assessment of the potential for nitrogen and phosphorus transport from each field. This is missing from the 2012 NMP and the 2014 NMP for fields 5, 6, 7, and 9. This is a violation of the requirements of the permit, and should be grounds for denial of the modification, and initiation of a complete open review of the permit, NOI, and NMP.

The proposed 2014 NMP modification asks to allow swine waste to be applied on fields 7, 8, and 9 with a Vac-Tanker (Section M, 2014 NMP), in addition to the sprinkler system. The 2012 NMP had waste applied to these fields only with a pump, pipeline, and sprinkler system (Section

M, 2012 NMP). The 2012 NMP indicates the manure source for these fields is WSP#2 only. The 2014 NMP shows the manure source for these fields as WSP#1 when using the Vac-Tanker, and WSP#2 when using the sprinkler.

Both NMPs show the plant available nutrients for WSP#1 as:

1. N = 7.52 pounds/1000 gallons
2. P₂O₅ = 5.78 pounds/1000 gallons
3. K₂O = 5.82 pounds/1000 gallons
4. WEP = 1.90 pounds/1000 gallons

Both NMPs show the plant available nutrients for WSP#2 as:

1. N = 6.04 pounds/gallon
2. P₂O₅ = 4.64 pounds/1000 gallons
3. K₂O = 4.68 pounds/1000 gallons
4. WEP = 0.07 pounds/1000 gallons

According to both NMPs, the fields in question have the following acreage and application rates:

- Field 7 = 74.29 acres at 81,000 gallons per acre = 6,017,490 gallons
- Field 8 = 15.50 acres at 81,000 gallons per acre = 1,255,500 gallons
- Field 9 = 41.24 acres at 81,000 gallons per acre = 3,340,440 gallons

These numbers look unrealistic to me, considering the facility is supposed to produce 4,193,092 gallons per year. But, assuming the numbers are correct, under the revision being proposed the fields would get nutrients in excess to their application under the current NMP by the following amounts if only the Vac-Tanker is used. This analysis is based upon the assumption that the pump, pipeline, and sprinkler are not installed, as is the current case:

1. N = (7.52 pounds/1000 gallon - 6.04 pounds/1000 gallon) X 81,000 gallons/acre = 119.9 pounds/acre
2. P₂O₅ = (5.78 pounds/1000 gallon - 4.64 pounds/1000 gallon) X 81,000 gallons/acre = 92.3 pounds/acre
3. K₂O = (5.82 pounds/1000 gallon - 4.68 pounds/1000 gallon) X 81,000 gallons/acre = 92.3 pounds/acre

4. $WEP = (1.90 \text{ pounds/1000 gallon} - 0.07 \text{ pounds/1000 gallon}) \times 81,000 \text{ gallons/acre} = 148.2 \text{ pounds/acre}$

Finally, when we finish the calculation by factoring in the application acres shown in the NMP, we come out with the following:

Field 7:

$$N = 119.9 \text{ pounds/acre} \times 74.29 \text{ acres} = 8,907.4 \text{ pounds above 2012 NMP}$$

$$P_2O_5 = 92.3 \text{ pounds/acre} \times 74.29 \text{ acres} = 6,857.0 \text{ pounds above 2012 NMP}$$

$$K_2O = 92.3 \text{ pounds/acre} \times 74.29 \text{ acres} = 6,857.0 \text{ pounds above 2012 NMP}$$

$$WEP = 148.2 \text{ pounds/acre} \times 74.29 \text{ acres} = 11,009.8 \text{ pounds above 20012 NMP}$$

Field 8:

$$N = 119.9 \text{ pounds/acre} \times 15.50 \text{ acres} = 1,858.5 \text{ pounds above 2012 NMP}$$

$$P_2O_5 = 92.3 \text{ pounds/acre} \times 15.50 \text{ acres} = 1,430.7 \text{ pounds above 2012 NMP}$$

$$K_2O = 92.3 \text{ pounds/acre} \times 15.50 \text{ acres} = 1,430.7 \text{ pounds above 2012 NMP}$$

$$WEP = 148.2 \text{ pounds/acre} \times 15.50 \text{ acres} = 2,297.1 \text{ pounds above 2012 NMP}$$

Field 9:

$$N = 119.9 \text{ pounds/acre} \times 41.24 \text{ acres} = 4,944.7 \text{ pounds above 2012 NMP}$$

$$P_2O_5 = 92.3 \text{ pounds/acre} \times 41.24 \text{ acres} = 3,806 \text{ pounds above 2012 NMP}$$

$$K_2O = 92.3 \text{ pounds/acre} \times 41.24 \text{ acres} = 3,806 \text{ pounds above 2012 NMP}$$

$$WEP = 148.2 \text{ pounds/acre} \times 41.24 \text{ acres} = 6,111.8 \text{ pounds above 2012 NMP}$$

From this analysis, it seems quite obvious to me that allowing the Vac-Tanker to apply waste from WSP#1 to fields 7-9 at the rates shown in the NMP would lead to serious problems with Phosphorus in the fields, and most likely would result in pollution of Big Creek and the Buffalo River. One of the reasons for this is that fields 7 and 9 have predominantly "occasionally flooded" soils. Occasionally flooded indicates a 20% probability of flooding in any given year. This equates to a 5 year return interval flood.

I respectfully request that ADEQ deny the NMP modification on the grounds that it is not protective of water quality and public health. I also request that ADEQ open up the entire NMP and

permit to public participation at this time as the documentation submitted by C&H Hog Farm, Inc. is full of omissions, discrepancies, and misrepresentation of facts.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles J. Bitting". The signature is written in a cursive style with a long horizontal stroke extending to the right.

Charles J. Bitting

From: [Vickerson, Casey](#)
To: [Deardoff, Amy](#)
Subject: FW: Comment on ARG590001, C&H Hog Farm, NMP and Permit Modification
Date: Thursday, March 20, 2014 8:13:43 AM
Attachments: [19marchltr2adeqpg5.pdf](#)
[19marchltr2adeqpg4.pdf](#)
[19marchltr2adeqpg3.pdf](#)
[19marchltr2adeqpg2.pdf](#)
[19Marchltr2adeqpg1.pdf](#)

From: Bailey, John
Sent: Thursday, March 20, 2014 8:10 AM
To: Vickerson, Casey
Subject: FW: Comment on ARG590001, C&H Hog Farm, NMP and Permit Modification

From: Chuck Bitting [<mailto:cjbitting@gmail.com>]
Sent: Wednesday, March 19, 2014 8:43 PM
To: Water Draft Permit Comments
Subject: Comment on ARG590001, C&H Hog Farm, NMP and Permit Modification

Please enter my comments on the attached files into the official record of comment on this issue. I can only scan one page at a time, so there are 5 pages.

Sincerely,

Charles J. Bitting
Marble Falls, Arkansas