



P. O. Box 145
Fayetteville, AR 72702

March 23, 2014

Teresa Marks, Director
Arkansas Department of Environment Quality
5301 Northshore Drive
North Little Rock, AR 72118

Subject: Request by C & H Hog Farms to Modify Nutrient Management Plan (NMP) for ARG590001

Dear Director Marks:

On behalf of the Ozark Society I am commenting on the subject request by C&H to modify the NMP to allow land application of waste via Vac Tanker method on Fields 7, 8, and 9. Previously the method of application for these fields was by a pump/pipeline/sprinkler system. We believe the request as stated does not conform to the terms of the General Permit, ARG590000, for the reasons stated below and request changes to the C&H modification. Please consider the two requests below as separate and distinct. The primary aspect of the General Permit that we are considering is Part 3.1. This states that the NMP must be developed in accordance with the Arkansas NRCS Conservation Practice Code 590 (Nutrient Management). I will abbreviate this as Code 590AR. From the section of Code 590AR entitled "Additional Criteria to Protect Air Quality by Reducing Odors, Nitrogen Emissions and the Formation of Atmospheric Particulates" it is stated: "To address air quality concerns caused by odor, nitrogen sulfur, and/or particulate emissions, the source, timing, amount, and placement of nutrients must be adjusted to minimize the negative impact of these emissions on the environment and human health." Code 590AR further mentions that for spreading waste on fields injection and tillage management are techniques to be used.

A. Vac Tanker Description is Not Adequate (Request 1)

Just stating that a Vac Tanker will be used is not an adequate description. A Vac Tanker can be rigged in a number of ways for waste application to

fields and the way in which it is rigged will determine whether or not it can meet the requirements of Code 590AR. A Vac Tanker is loaded by using a suction pump to evacuate the air from the tank and then the waste is pulled into the tank from a pond or other source through the use of the vacuum. However, it can be rigged in many different ways to apply the waste to the field. The tank is usually pressurized and the waste is forced against a splash plate at the rear of the tanker with streams of waste being spread behind and to both sides of the tanker. Another method would be to use a sprayer and spray the waste onto the field. Both of these methods would result in fine droplets of waste being injected into the air. This would result in vaporization of ammonia, hydrogen sulfide, and entrainment of particulate matter such as fecal coliform, cryptosporidium, and other pathogens. Any wind, even light wind, could carry these contaminants into the surrounding area, i.e. to populated areas. This is a particular problem with spreading waste on Field 7. It is one of the four fields nearest the Mount Judea School. The edge of Field 7 is less than 250 feet from the school grounds and approximately 1,100 feet from the school buildings. A large part of Field 7 is also in the direction from which the prevailing winds blow towards the school. You are probably aware of the health issues of children in schools near swine CAFO's in North Carolina and other states. If not, please read the following references (1, 2, 3, 4). There would also be a problem on Fields 8 and 9 where there are residences near the fields. The references cited plus many others show that the emissions from swine CAFO's are a health problem of national significance, particularly for children. Many diseases from respiratory distress to brain issues have been documented. You should take every precaution to minimize the risk to the children.

There is at least a partial solution to these issues. A publication from an agricultural research center of the European Union, i.e.

<http://www.teagasc.ie/research/reports/environment/4026/eopr-4026.pdf> ,

states that the sources of emissions and odors from swine farms are 30% from barns, 20% from ponds, and 50% from spreading of the waste on fields. However, this article, in discussing the methods of spreading waste from Vac Tankers, states that significant reduction in reducing odor, other emissions, and ammonia volatilization can be obtained if band spreading or shallow injection is used. Band spreading is laying down of the liquid in a thin film on the surface. Injection, recommended by the *NRCS Agricultural Waste Management Field Handbook*, Chapter 12, to prevent ammonia volatilization, is, as the name implies injecting the waste a few inches into the ground. The *Handbook* lists a number of ways that this can be done without damage to vegetation growing in the field. A Vac Tanker, when rigged out with the proper accessories, will have a substantial advantage over spraying for protection the environment and human health.

Because of the danger to human health due to many of the waste components, because of the nearness of the Mount Judea School, and because of the requirement in ARG590000 that there must be an odor and emissions control plan, we request ADEQ require that the Vac Tanker(s) used for spreading waste on Fields 7, 8, and 9 be rigged to apply the waste by injection.

Also, it would be a substantial advantage for human health and environmental protection if C & H would voluntarily use Vac Tankers rigged to apply waste by injection for all of the fields.

B. Setbacks and Areas Available in Fields 7, 8, and 9 for Spreading Waste (Request 2)

In requesting a NMP modification C & H has opened the door to the effect of the referenced requirement of Code 590AR in ARG590000 on where and when the waste should be spread on Fields 7, 8, and 9. Again proximity of the Mount Judea School is a major issue and thus the health of the children. Even with injection of the waste there will still be toxic components of the waste in the atmosphere above Field 7 that can be carried by even light winds to the school grounds and to the school. **We suggest additional safeguards of never applying waste to Field 7 when school is in session.** Also, Field 7 has been designated as the "emergency field," i.e., the field to be used for receiving large quantities of waste if the ponds are nearing capacity. **We request that another field (and not another field near the school) be designated as the emergency field.** Also the setback requirements for Fields 7, 8, and 9 should be re-examined to make certain there is no residence within 500 feet of the part of a field where waste will be spread.

We believe that our request in Section A is well within the area that can be covered by public comment for the NMP modification. If ADEQ determines that our request in Section B is not appropriate for public comment then we request that you invoke Section 6.3.c of the General Permit, ARG590000, i.e. "Permit may be modified if a determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification."

We cannot help mentioning at this point that this whole issue would not have arisen if C & H had followed the mandates of the General Permit in the first place or if ADEQ had insisted that they follow the rules. Two of several requirements that were not followed were the inclusion of an odor and emissions control plan as required by Code 590AR and a listing of the nearby residences, also required by Code 590AR.

Thanks for your consideration or our comments.

Sincerely,

Robert Cross, President
Ozark Society
P.O. Box 145
Fayetteville, AR 72702
(479) 466-3077

References (copy web addresses into browser):

(1) http://www.ncifap.org/_images/Adverse_Effects_of_hog_ops_.pdf

(2) <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1638284/>

(3)

http://www.adeg.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/ARG590001_Article%20for%20CAFO%20Air%20Pollution%20and%20Children_20130508.pdf

(4)

http://buffaloriveralliance.org/Resources/Documents/understanding_cafos_nalboh.pdf

From: [Robert Cross](#)
To: [Water Draft Permit Comments](#)
Subject: Comments on C&H Nutrient Management Plan Modification
Date: Monday, March 24, 2014 12:21:17 PM
Attachments: [ADEQ 3-23-14.pdf](#)

To: Teresa Marks, Director ADEQ

From: Robert Cross, President, Ozark Society

Subject: Comments on C & H NMP Modification

The Ozark Society's comments are attached.