

From: WebstersMill@aol.com
To: [Water Draft Permit Comments](#)
Subject: Comment on C&H Modification Request : ARG590001 AFIN 51-00164
Date: Friday, August 07, 2015 9:16:18 AM

MARJORIE PLAMER HUDSON
Webstersmill@aol.com
Buffalo River Watershed Alliance, Member

August 7, 2015

ADEQ

Comments Re: ARG590001 AFIN 51-00164

C&H Hog Farm modification request to install pond liners, cover and flare on waste ponds #1 and #2.

This modification to install synthetic liners a cover, and a methane flare on the waste ponds

TO WHOM IT MAY CONCERN:

Installing pond liners, cover and flare on waste ponds #1 and #2 is proposed to address the methane produced by the decomposing manure/waste.

This proposal will not adequately address the methane, and the disturbance of the existing pond liner may contribute to further degradation of the area immediately surrounding the existing ponds:

- 1) Liquid and solid waste must be removed from the ponds before liners can be installed. Sludge removal will inevitably disturb the existing clay liner. Solids have now infiltrated the clay layer, and likely the underlying soil and groundwater.

Disturbing the clay layer may cause embedded waste to further seep through the clay and into groundwater at an accelerated rate. When the Big Creek Research and Extension team (BCRET) built their nearby monitoring trenches, they initially detected very high E. coli levels which they attributed to soil disturbance during construction.

It is reasonable to expect that the same may occur, but on a much larger scale, when the manure impregnated clay layer is disturbed during liner installation.

Is there precedence for retrofitting synthetic liners in existing waste storage ponds perched atop karst substrata? Have those performing the installation had experience under these conditions. Has ADEQ?

Until proper measures are taken to eliminate and monitor for any groundwater contamination that may result due to construction and installation of the liners, this request should be denied.

2) Swine waste has now permeated the clay liner and some residual will remain after sludge is removed. When the membrane liners are installed over the clay, which contains embedded residual organic waste, decomposition can produce methane and other gasses. This gas accumulation beneath the membrane liner can cause it to become displaced and float to the surface of the pond, perhaps resulting in rupture, seam failure or leakage. Until proper measures are taken to prevent this from occurring this modification should be denied.

3) Seam failure, punctures, mechanical damage, etc., have caused membrane liners to fail and leak. These leaks may not be catastrophic but may occur slowly and go unnoticed until groundwater contamination reveals the problem. Leak detection technology is available to determine when such accidents and leakage occur. ADEQ should require such technology and until it is installed this modification request should be denied.

4) The gas flare may impact air quality at the nearby Mt Judea school, town and nearby residences. The public should be informed of what the levels and components of this discharge will be and what the potential health impacts may be. Until the public is fully informed and an air permit is issued to monitor and regulate discharge this modification should be denied.

5) Buffalo River Watershed Alliance and others have previously and repeatedly described numerous errors, inaccuracies and missing data contained in the C&H NMP.

To date, ADEQ has refused to require corrections. This and all future modifications should be denied until all errors, inaccuracies and missing data contained in the NMP are corrected.

6) The Big Creek Research and Extension Team has provided data which strongly suggests that pond leakage is occurring. This modification should be denied until it is

determined if the current ponds are leaking and impacting groundwater.

There seems to be a rush to make modifications to the already deficient manure/waste detention ponds without regard to the impact the changes themselves will have on the environment.

The methane flare is another instance of narrow focus. Methane is not the only gas to be considered a byproduct of the manure/waste decomposition. There are soluble and insoluble gases associated with hog manure pits. Of the major gases, there is Methane, Carbon Dioxide, Ammonia and Hydrogen Sulfide, as well as volatile organic substances. How will the facility handle the other gases?

What are the byproducts of the methane flare? What contaminants will be released into the atmosphere. Carbon Dioxide is considered air pollution. Concentrated facilities such as these contribute to air pollution on so many levels as to be considered 'hot spots'.

What will be the impact from the deposition of ammonia on the surrounding land, trees and plants, where it will be washed into the streams, rivers and watershed? What testing is done surrounding such facilities to measure the increase in nitrogen deposition into the watershed which is a result of the ammonia production in the facility? What testing is done to determine the measure of increased eutrophication in surrounding waters and collected waters caused by the increased nitrogen?

The environmental impact of this facility is negative.

Not only should these and all future modifications be denied, but this facility should be closed due to the predictable and unacceptable environmental impacts it is creating.

Marjorie Palmer Hudson

Webstersmill@aol.com

Buffalo River Watershed Alliance, member

August 7, 2015