

Allison, Becky

From: Lin Wellford <linwellford@gmail.com>
Sent: Tuesday, August 09, 2016 11:16 AM
To: Help-DrillProject
Cc: Moulton, Charles
Subject: Ozark River Stewards submission of comments

Director Becky Keogh
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Aug. 9, 2016

Dear Director Keogh:

Thank you for your recent action to delay drilling at the C&H Hog Farms, Inc. facility until further review and public comment were provided. The Ozarks River Stewards, an organization comprised of hundreds of Arkansans concerned about water quality and the preservation of our environment, wishes to provide the following comments and observations:

The Arkansas Department of Environmental Quality's Hazardous Waste division (HWD) provides guidelines for drilling boreholes (Policy#HWD-02) to determine where contamination may be located:

http://www2.adeq.state.ar.us/hazwaste/pdfs/monitoring_well_construction_geotechnical_boreholes_and_plug_and_abandonment_policy.pdf The document on page 2 states that "any work plans, site investigations, or other hydrogeologic reports submitted to the HWD must reflect compliance with this policy or may be unaccepted". Tammie Hynum, current or former chief of the Hazardous Waste Division, (a current organizational chart is not available on line) is listed as one of ADEQ's staff on the site investigation plan provided by the contractor, Harbor Environmental and Safety (HES).

Given the scope of the proposed investigation and ADEQ personnel assigned to the project to determine if hog waste has leached into the soils underneath the C&H manure lagoons, the current project should be governed by the guidelines in Policy # HWD-02 and adhered to by HES and ADEQ.

Policy HWD-02 notes in section II(2) "At minimum, the design and construction techniques published by the United State Environmental Protection Agency (USEPA) in the Resource Conservation and Recovery Ground Water Monitoring Technical Enforcement Document (RCRA-TEGD) shall be used as a guide in the **location, construction and design of monitoring wells**" (emphasis added). The document goes on to say "...the HWD to assure that this is accomplished in an orderly scientific manner by the following procedures: The HWD will review Hydrogeologic Work plans, Investigations, Reports, and other submittals for compliance with the RCRA-TEGD...rules and regulations for installing...boreholes and ground water monitoring wells."

It should be well documented and included in the site investigation work plan (SIWP) which state and federal regulations and scientific guidelines govern this investigation.

Upon review of the RCRA-TEGD, there are several instance (items A and B) where HES's proposed SIWP does not comply with these environmental regulations.

A. The SIWP will not evaluate ground water flow.

The RCRA-TEGD 1.1 states the initial investigation "should accomplish two tasks in conducting a hydrogeologic investigatory program":

1. Define the geology beneath the site area
2. Identify ground water flow paths and rates

Table 1.1 further documents the minimum requirements that should be used and clearly requires "Narrative description of ground water with flow patterns and water table or potentiometric maps (plan view>with flow lines").

The SIWP is out of compliance by not identifying the direction of the ground water and flow path. We ask that you include these investigations in a revised SIWP.

B. The SIWP proposes to drill only 1 borehole.

Figure 1.1 A and B of the RCRA-TEGD identifies a basic design that contains 3 boreholes and 3 piezometers and 4 boreholes and 4 piezometers. This is the most simplistic of designs.

"The borehole program is necessary to establish the small-scale geology of the area beneath the facility and place it in the context of the geology of the region or locale" (TEGD, page 9).

By not drilling a sufficient number of boreholes to determine the small-scale geology underneath the manure holding ponds and if the ponds are leaking, the SIWP is not in compliance with the RCRA-TEGD. Any scientist regardless of expertise would find drilling only one sample to be completely absent of any scientific rigor or use for investigation of an environmental problem. If HES and ADEQ follow sound scientific principles, the larger the number of samples, the more confidence in an evaluation. It would seem that if ADEQ is following its mission statement to "protect, enhance and restore the natural environment for the well-being of all Arkansans" that the SIWP would include drilling as many boreholes as possible, and certainly at least 3.

C. The SIWP proposes to drill to 100 feet.

The SIWP does not drill deep enough. The boreholes should be drilled to depth of at least 150 feet or until the drill encounters a deep layer of bedrock, whichever is deeper. Only 3 bores holes were drilled during the initial site evaluation for C&H hog operation, with the maximum depth of 18.5 feet bls. In a karst environment, the depth of the drilling was completely inadequate and did little to characterize the geology below the manure lagoons. According to the SIWP, the drinking well drilled in 2013 encountered ground water at 138 feet bls. If the SIWP only drills to 100 feet, ground water may be present at greater depths and would remain undetected by the investigation.

D. The SIWP is incomplete.

The SIWP does not include well log information or location of the second drinking well recently drilled by C&H in 2015. Figure 2 should identify the location of the three previous boreholes and two drinking water wells.

E. The suite of Analytes of Interest (AOI) should be expanded to include compounds that are commonly found in hog feed. The recommended additional AOIs are listed below:

- • Copper
- • Zinc

F. Documentation of the borehole operation should be videotaped continuously.

Once full investigation is completed, ADEQ should post the entire video within 7 days of completion of the drilling on its website.

G. Allow an independent observer chosen by an environmental group to observe the operation.

We fully support the Buffalo River Coalition's selection of Dr. Bert Fisher. He has extensive knowledge of investigative work in confined animals feeding operations since 1997 and holds a ph. D in Earth Sciences. He is also an adjunct professor at the University of Tulsa.

ADEQ selected Mr. Tai Hubbard from Indiana without consulting any state environmental organizations, particularly the Buffalo River Coalition. Mr. Hubbard does not have the required experience or education to serve as an independent observer for the people of Arkansas.

In conclusion, we ask you to include the above recommendations in your discussion with HES to revise the WISP. The current plan is not adequate and does not meet minimum scientific standards. We find it very disturbing that ADEQ, up to this point, has consistently ignored the suggestions and input from the citizens of Arkansas and its environmental community. We trust that the statements that you made at the Legislative Committee hearing regarding working with citizen groups representing environmental concerns will indeed result in a more open and responsive atmosphere. It is our hope and expectation that you and your staff will perform your jobs with integrity, honesty and in keeping with the ADEQ mission statement to protect the precious natural resources of this state.

Respectfully,

Patricia Kent
Paula Matthews
Lin Wellford

representing the Ozark River Stewards, c/o Patricia Kent, 618 N. Wilson Ave., Fayetteville, AR 72701

Submitted via email by Lin Wellford