December 4, 2015

Secretary Susan Mosier
KDHE
1000 SW Jackson St. Su 420
topeka, Ks. 66612-1367

Subj: Seaboard Farms
     Ladder Creek West Site in Greeley County
     A-SHGL-H002
     Federal Permit #KS0100862
     Petition for Reconsideration

Dear Secretary Mosier,

This is a petition pursuant to K.A.R. 28-16-62(g) for reconsideration of your decision to issue a permit, effective November 10, 2015, to Seaboard Foods LLC to build a swine feeding operation at Ladder Creek West in Greeley County, Ks. I am presenting this petition on behalf of the Sierra Club and residents of Greeley County. As we explained in our comment on this permit application, it should not have been issued. Accordingly, the relief we now seek is revocation or termination of the permit.

This petition incorporates the comments we submitted on October 8, 2015, plus the additional information to be set out herein in response to KDHE's letter dated November 10, 2015 to those who submitted comments on the draft permit.


As noted in KDHE's response, under 28-18a-22(e)(3) Seaboard may choose any of the following options to close the waste treatment impoundments:

(A) Removing the berms, and leveling and re-vegetating the site to provide erosion control;
(B) leaving the structure or structures in place for use as a freshwater farm pond or reservoir
(C) retaining the structure or structures for future use as a part of a swine waste management or pollution control system; or
(D) using any other method approved by the secretary;

Seaboard clearly selected option (A) as the basis of their closure cost estimate since it lists removal of sludge, sampling of soil within the impoundment area and re-vegetation. Therefore the other options are irrelevant to KDHE's duty to assess Seaboard's proposed closure plan.
plan. Re-use of 89 acres of lagoons as freshwater ponds would, of course, be impermissible in that arid location.

Under 28-18a-24, *Financial Assurance for swine waste-retention lagoon or pond closure*, KDHE is required to ensure that Seaboard meets the following requirements:

(c) Each operator of swine facility with an animal unit capacity of 3,725 or more shall submit, as a part of the evidence provided to the department, a detailed written estimate in current dollars of the cost to close the swine waste-retention lagoons or ponds in a manner acceptable to the department. The estimate shall be prepared by a professional engineer or consultant approved by the department. (bold added)

(d) To estimate the cost to close the swine waste-retention lagoons or ponds, the swine operator shall consider the following:
(1) The cost of the swine waste-retention lagoons or ponds closure by determining the cost of a third party to collect and dispose of all swine or other process wastes stored or retained on-site in the lagoons or ponds at a specifically identified off-site application area; and
(2) all swine waste-retention lagoons or ponds to be 100 percent full, for the purpose of estimating costs.

Furthermore, KDHE acknowledges in their response that "ammonium contaminated soil" must be removed. Indeed it would qualify as a process waste. But then the Department states, "The cost estimates included with the Closure Plan are not meant to be precise." That statement is not supported anywhere in the relevant regulations and is directly contradictory to the requirement that the Closure Plan include a detailed written estimate.

Seaboard's Closure Plan and Financial Assurance based on Option (A) fails to meet the relevant regulation because it is not complete and it is not detailed. In particular it leaves out the following major costs:

1. It does not include the cost of earth moving to level the site as clearly required under Option (A). This is a very significant cost because there are 89 total acres of lagoons;

2. It does not include the cost of removing and the land application of the large mass of ammonium that will build up under the lagoons that lack plastic liners on the bottoms. This mass can be estimated using the site soil-borings and the model developed by Kansas State University. As we noted in our comment, soil borings submitted with the application show permeable strata characterized as clayey sand (SC) or silty sand (SM) at the elevation of the lagoon bottoms at many of the units. The Department should also note that the estimate of depth of the ammonium plume (total seepage) must be calculated assuming a driving force on seepage attributable to lagoons that are 100% full. See also our comment below on the requirement for disposal of this material.

3. Nowhere does Seaboard list the cost of any earth moving, only the removal of sludge and wastewater. This is an obvious and inexcusable omission.
4. Seaboard has not identified exactly where they intend to apply the ammonium saturated soil as required in the regulation noted above, nor have they estimated the cost of irrigation of crops for nutrient uptake.

While admitting in its response that Seaboard has submitted inconsistent information on the depth of their test borings, the Department says, "However, the depth of the soil borings provided in the closure cost estimate is irrelevant and provided only as a means to estimate the cost of closure." This statement is incomprehensible. Of course that is the purpose of the borings and, in order for the Plan to be complete and detailed, the depth of these borings must reflect the expected depth of mass of ammonium-saturated soil that will surely be far greater than the one or two feet Seaboard has suggested.

Since the completion of KSU’s publicly funded research on lagoon seepage and remediation in 2001, KDHE has consistently overlooked its implications. This research has never been challenged or contradicted. It was intended to guide the Department in their regulation of livestock waste impoundments. It is clear that KDHE has allowed Seaboard to leave out of their Closure Plan and Financial Assurance very substantial costs for removing huge quantities of earth from 89 acres of lagoons and for grading the area to a level elevation.

2. Lack of Water to Properly Operate the Ladder Creek West Site and to implement the Nutrient Utilization Plan (NUP) and the Closure Plan.

As we noted in our comment the latest data from the Kansas Geological Survey (KGS) show that the aquifer in northern Greeley County has been depleted by more than 60% from predevelopment levels, and "(KGS) researchers concluded that parts of the aquifer are effectively exhausted in Greeley, Wichita, and Scott counties" (for typical agricultural use). Typical agricultural use would include the irrigation practices in that area.

As KDHE has noted, a complete and approved nutrient management or utilization plan is a required element of any NPDES permit to allow certain runoff from waste application fields to qualify as a permissible agricultural storm water discharge.

§ 412.4 Best management practices (BMPs) for land application of manure, litter, and process wastewater, which applies to swine in federal rules states:

(c) Requirement to develop and implement best management practices. Each CAFO subject to this section that land applies manure, litter, or process wastewater, must do so in accordance with the following practices:

(1) Nutrient Management Plan. The CAFO must develop and implement a nutrient management plan that incorporates the requirements of paragraphs (c)(2) through (c)(5) of this section based on a field-specific assessment of the potential for nitrogen and phosphorus transport from the field and that addresses the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals, while minimizing nitrogen and phosphorus movement to surface waters.
Elsewhere EPA refers to this requirement as a \textit{realistic yield goal} for each crop in each waste application field in the Plan.\textsuperscript{3}

Therefore KDHE is responsible for assessing whether Seaboard's assumptions for crop yields in their nutrient utilization plan are realistic. KDHE states they are not responsible for assessing whether Seaboard has enough water at the Ladder Creek West site. In view of the following specific conditions at this site we disagree:

1. Seaboard's NUP relies on eight fields of irrigated corn for more than 60\% of the total capacity of all NUP fields to take up nitrogen. Sufficient irrigation water is crucial for Seaboard to attain their assumed yield goals over 25 years.

2. As demonstrated in part one of this petition Seaboard's will also need to land apply an enormous amount of ammonium-saturated soil which is not accounted for in their NUP. The Ladder Creek lagoons will, in many instances, sit in permeable strata. The aforementioned KSU research estimates that more than 253 tons of ammonium-N could build up under a 6.18 acre lagoon over 25 years.\textsuperscript{4} Projecting this to the 89 acres of lagoons at Ladder Creek West one obtains a total of \textbf{7.3 million pounds of nitrogen} that must be properly disposed of. At an uptake capability of 256 pounds per acre, this will require some 28,500 acres of \textit{irrigated} corn in one season. This dwarfs both the 930 acres of corn and the approximately 3000 total acres listed in the NUP. Thus Seaboard will need a very large amount of irrigation water to implement the proper closure of the site.

3. If Seaboard were to conclude, after careful analysis of the aquifer water that will remain after 25 years, that it must chose an alternate method, such as hauling to a landfill or in-situ closure with an impermeable cover, then it must include that cost in the present Closure Plan.

In its response to comments KDHE says, "Seaboard Foods LLC is not required by statute or regulation to provide an analysis of where and how they will obtain the irrigation water necessary to achieve the stated yield goals in the NUP. Nor is the Department required to ensure the permittee has access to sufficient water to ensure the permittee has access to sufficient water."

We strongly disagree. The Kansas Geological Survey has raised serious concerns as to whether the aquifer at this location can support such a heavy load. Under federal rules KDHE has a duty to assess whether Seaboard has prepared a realistic nutrient management plan. They clearly have not. Nor have they provided a complete and detailed Closure Plan and Financial Assurance as required by Kansas rules. Therefore we respectfully request that KDHE revoke the subject permit until these deficiencies are corrected.

Sincerely,

Craig S. Volland, Chair
Agriculture Committee
Kansas Chapter, Sierra Club
References.
2. http://www.kgs.ku.edu/Publications/pic18/pic18_1.html (Fig. 6 &7).