

## **Department Response to Public Comments**

**NORTH DAKOTA  
DEPARTMENT OF HEALTH**

**Division of Water Quality**

**Departmental Memorandum**

TO: File

FROM: Division of Water Quality

RE: Comments on Rolling Green Family Farms RE, LLP  
Southeast of Buffalo, ND  
Cass County

DATE: June 30, 2016

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On September 8, 2015, the North Dakota Department of Health (Department) received an application from Rolling Green Family Farms RE, LLP for an animal feeding operation (AFO) Approval to Operate permit. Two updated applications were received, one on December 11, 2015 and then the final application on December 18, 2015. When the fact sheet and draft Approval to Operate permit were completed, the Department issued a public notice that was published in The Fargo Forum and posted to the Department's website: <http://ndhealth.gov/EHS/PublicNotices.aspx>. The public notice was placed in the Fargo Forum because it is the paper of record for Cass County. A list of federal, state, and international government offices along with private entities were also notified of the website posting. The Department also maintains a list of mailing addresses to which letters of notification were sent. In addition, the Department sent the public notice information to be posted by the U.S. Postal Service located in Buffalo, ND and to the Cass County Auditor's office. After receiving many requests for a public hearing, the Department issued a second public notice extending the public comment period starting February 1, 2016 and ending March 19, 2016, and announcing a March 17, 2016 informational meeting followed by a public hearing in Buffalo, ND.

State water quality regulations require operators of AFOs to take adequate steps to prevent adverse impacts to waters of the state by obtaining an Approval to Operate permit. See North Dakota Administrative Code (NDAC) 33-16-03.1. The requirements developed for a facility are specific to site conditions. The Department has the authority to address only environmental issues, such as protecting water quality (NDAC 33-16-02.1) and air quality. See North Dakota Century Code (NDCC) 23-25. Addressing zoning, land use, social and economic issues is the responsibility of the local zoning or other authorities and will not be addressed in this response as they are beyond the

Department's authority.

Below are summaries of the written and oral comments received. The full comments are included in section 8 of the final package. Although there are specific responses to each comment, the document should be read in its entirety with the understanding that a response to one comment may be applicable to additional comments. The Department has updated the Approval to Operate permit and fact sheet to provide clarification and address comments received during the comment period. Substantive changes are discussed in the responses.

I. Jeffery Missling

- a. Comment: I want to thank you for the excellent work you do in balancing the laws of the state (in protecting our natural resources) with the development of new commerce that drives our state's economy. I'm writing in support in the proposed hog farm near Buffalo, ND for several reasons.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: Our setback provisions in my home county (Cottonwood County) called for setbacks of ONLY 1/2 to 3/4 of a mile (depending on the number of animal units) and to my understanding the proposed site is as much as 1-mile from any nearby buildings/farmsteads/etc. That is a more than adequate "buffer" zone, in my humble opinion. Desolate and rural settings like the one near Buffalo are the PERFECT location for livestock farms like the proposed one!

Department Response: The Department has setback requirements that apply when zoning is not in place on the local level. The Rolling Green Family Farms RE, LLP proposed facility meets the state's default setback, which is calculated to be 1 mile. A total of 3,382.4 Animal Units (AUs) were calculated by the following formula:

- Greater than 55 pounds:  $0.4 \times 8,256$  animals = 3,302.4 AUs
- Less than 55 pounds:  $0.1 \times 800$  animals = 80.0 AUs
- Total = 3,382.4 AUs

Note the "Potential Sources of Odors" section in the fact sheet has been updated in regards to comments received.

NDCC § 23-25-11. Regulation of odors - Rules provides:

7. a. In a county that does not regulate the nature, scope, and location of an animal feeding operation under section 11-33-02, the

Department shall require that any new animal feeding operation permitted under chapter 61-28 be set back from any existing residence, church, school, business, public building, park, or campground.

(4) If there are at least two thousand one animal units but no more than five thousand animal units, the setback for a hog operation is one mile [1.60 kilometers] and the setback for any other animal operation is three-fourths mile [1.20 kilometers].

II. Jerry Jeffers

- a. Comment: Any opportunity to expand a part of agriculture in our state should be embraced. The agriculture economy is what makes towns like Buffalo, ND and to stand in the way when a farm is trying to shore-up their bottom line is wrong. If these folks were not concerned with the health and well-being of those around them, they would not have made such sincere efforts to follow the regulations that they need to meet set forth by the Department.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

III. Darrick Johnson

- a. Comment: If they are following all the guidelines to start a new operation, what more can be asked of them. We don't want to make ND an unfriendly place to do business. I support the new hog farm.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

IV. Marty Visto

- a. Comment: Why are people opposed to this hog farm in Buffalo? They are working with the Health Department to meet all the requirements for public health and safety. There is no reason fear-mongering should stop this farm from moving forward. I find it truly amazing that numerous hog operations exist throughout Minnesota, a much more populated state than North Dakota, and yet there is considerable backlash to any type of animal operation proposal for ND.

Department Response: Thank you for the comment.

V. Chris Brossart

- a. Comment: I believe that the proposed hog farm is good for the economy

in North Dakota.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: The proposal has followed all of the rules and regulations and should not be restricted in any way.

Department Response: Thank you for the comment.

## VI. Daryl Dukart

- a. Comment: I support business growth and diversification in North Dakota. It's good for our economy. And a livestock farm is a business just like any other, so I support the proposed hog farm planned for Buffalo, North Dakota.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: As a County Commissioner, Chairman of two western North Dakota organizations (Vision West and North Dakota Association of Oil and Gas Producing Counties) which deal with energy development and population growth. Moving forward is always been hard, as very often we are faced with a challenge or change in areas of smaller rural development and these types of issues seem to become major topics of discussion.

Department Response: Thank you for the comment.

- c. Comment: I worked alongside many other pork producers and ranching operation owners back some years ago to establish the Health Department rules and regulations for confined livestock operations. Since that time we have amended, added and clarified parts of the Century Code and the Health Department has been very supportive at every stage.

Department Response: The Department has had rules relating to animal feeding since the late 1960s. The rules were last updated in 2005. The Department, in cooperation with agricultural producers, zoning officials, and environmental groups, has also created a model ordinance for livestock zoning in the state. The history of this effort is available on the Department's website [www.ndhealth.gov](http://www.ndhealth.gov).

- d. Comment: Again I support the hog farm planned and will always support livestock feeding operations which are regulated under our State Health Department rules and regulations under the North Dakota Century Code.

Department Response: Thank you for the comment.

VII. Craig Vaughn

- a. Comment: Livestock production in North Dakota significantly lags behind other neighboring states, that being said the family proposing the operation has met all the laws/standards that are required of it. Why then should it even be a consideration whether or not they are allowed to operate? All the comments of I have heard from opponents are downright ridiculous, ranging from not wanting to see pigs every day (they'll be in barns) to not even caring whether or not it will affect them, they just don't want it. A facility of this type would bring excellent jobs, an influx of outside capital into a small community that could desperately need it. If a business of some other sort wanted to move in I doubt there would be any dissenters. The hog operation will also benefit other area farmers by providing another market for feed stuffs and possibly lowering the basis on selling their crops to local elevators.

Department Response: Thank you for the comment. Rolling Green's application was reviewed according to State of North Dakota laws pertaining to NDAC 33-16-03.1 - AFOs, NDCC 61-28 - Water Quality and NDCC 23-25 - Air Quality.

VIII. Myrene Peterson

- a. Comment: I was raised in South Central Minnesota in the heart of hog farms. My father was a hog farmer. The proposed hog farm is NOT the hog farm of my father or grandfather. This is highly technical with trained and educated workers.

Department Response: Thank you for the comment.

- b. Comment: The waste product will be a benefit to the area farmers. (people are against the smell --but -- with technology, the smell is gone) It is a natural product which will not have a negative effect on the environment. It will be located away from any town -- but the people of the town allow anhydrous tanks on the main street. These are very dangerous.

Department Response: Under NDAC § 33-16-03.1-07(4)(k), the department requires) and NDAC § 33-16-03.1-08(3), nutrient management plans for regulated livestock facilities in the state. According to NDAC § 33-16-03.1-03(20), the definition of a "nutrient management plan" (NMP) means a written description of the equipment, methods, and schedules by which:

- a. Manure, litter, and process wastewater is beneficially reused in an environmentally safe manner such as being applied to land at appropriate agronomic rates as nutrients or fertilizers; and
- b. Water pollution and air pollution, including odors, are controlled sufficiently to protect the environment and public health.

An NMP is upheld by NDAC § 33-16-03.1-10 - Enforcement and compliance.

The application rate of manure and nutrients will be monitored to ensure nutrients are applied in a manner so as not to impact waters of the state. Soils will be tested annually so that nutrients are applied at agronomic rates. The use of buffer strips can also reduce loading into rivers and streams. The use of a toolbar to inject manure directly into the soil also reduces the potential for nutrients to reach waters of the state. As stated in the *North Dakota Livestock Program Design Manual* Section 7.5:

1. The manure application rate shall not exceed the recommendations for nitrogen and phosphorous based on either the North Dakota Phosphorous Index (PI), as developed by the NRCS, or NDSU Extension Service recommendations based on soil testing.
2. The PI allows manure and other sources of nutrients to be applied at rates to meet the nitrogen needs of a crop if the PI rating is low or medium. If the PI is high, it allows manure and other sources of nutrients to be applied at rates to meet the phosphorous removal in the crop biomass. If the PI is very high, it requires that no manure be applied to that field. Manure shall not be applied to fields where the soil test phosphorous exceeds 125 parts per million (ppm) (250 lbs per acre).
3. Manure and other sources of nitrogen must not be applied at rates that exceed:
  - a. The recommended nitrogen application rate during the year of application; or
  - b. The estimated nitrogen removal in harvested plant biomass for legumes during the year of application.
4. NMPs shall contain a field-specific assessment of the potential for nitrogen and phosphorous transport from the field. The assessment for phosphorous can be done using the phosphorous screening tool and soil tests, or the PI assessment.

There are many benefits to using hog manure for fertilizer:

1. Increases organic matter in the soil.
2. Slower release of nutrients than commercial fertilizer.
3. Increase soil water-holding capacity and in turn decreases runoff.

Note the NMP sections on application rates and expected manure volumes/nutrients have been updated, as well as the “Manure Application” section of the fact sheet.

- c. Comment: If we don't support production ag, the bacon with your eggs at breakfast will be coming from China.

Department Response: Thank you for the comment.

- d. Comment: We have heard the cry of the people of North Dakota -- Our schools are dying. The town is dying. What can we do? What can we do? Here is an opportunity to have children in the schools and the town to grow.

Department Response: Thank you for the comment.

IX. Diane Hanebutt

- a. Comment: Increased livestock production is good for everyone. The setbacks are reasonable and protect the neighbors from any realistic problems and concerns. I just hope that emotion is not allowed to overrule sound science, rules that are already in place, common sense.

Department Response: Please refer to response to comments I(b) setbacks and VII(a) laws and rules.

X. Andrew Peterson

- a. Comment: The 2016 hog operations are extremely well managed and have to be very efficient to be profitable. These farms use the newest technology to reduce disease and the use of antibiotics.

Department Response: The North Dakota Board of Animal Health administers the rules for disease. Most antibiotics are administered under the supervision of a licensed veterinarian. The Food and Drug Administration (FDA) administers rules on the use of antibiotics in livestock feed. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: The Veterinary Feed Directive that will be going into effect on January 1, 2017 prohibits the use of antibiotics in the feed or water for

growth promotion. The use of antibiotics can only be used for the treatment of disease as a proscriptioin from a veterinarian. This proscriptioin is only valid for 6 months for a particular group of animals.

Department Response: Please refer to response to comment X(a) antibiotics.

- c. Comment: One year storage of manure will allow the manure to be pumped from the storage and injected into the soil; this will reduce any odors from this operation.

Department Response: Thank you for the comment.

- d. Comment: The manures fertilizer value is much greater than chemical fertilizer. The manure's nitrogen, phosphorus and potash level will be monitored to comply with the Dept of Health's regulations.

Department Response: Please refer to response to comment VIII(b) manure application.

- e. Comment: The auxillary services such as livestock hauling, purchasing of feed and ingredients will benefit the local business and farmers.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- f. Comment: It also increases the tax base.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

## XI. Paul Becker

- a. Comment: Livestock expansion is good for North Dakota.

Department Response: Thank you for the comment.

- b. Comment: It's good for the grain farmers too, and I think we should welcome the hog farm near Buffalo.

Department Response: Thank you for the comment.

- c. Comment: We had a large hog farm built in our county (Ramsey) about 10 years ago, there were many people from Devils Lake that opposed the farm. There have been no problems with the hog farm and I don't think the average citizen in Ramsey County even knows that the hog farm was built.

Department Response: Thank you for the comment. To date, there have been no department-documented complaints and no enforcement actions against Viking Feeders.

XII. Tom Christensen

- a. Comment: Expansion of animal agriculture is much needed in North Dakota.

Department Response: Thank you for the comment.

XIII. Frank Walker

- a. Comment: Agriculture in ND continues to be number one as an economic engine.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: Continued support of properly vetted production units such as this hog farm is very important to feeding the nation, not to mention maintaining the health and viability of rural communities.

Department Response: Thank you for the comment.

XIV. Seth Estenson

- a. Comment: We are a country with free-market principles that we preach all around the world; if Rolling Green Farms is following all procedures and full cooperation is given throughout the permitting process there should be no reason that the community and the State of North Dakota shouldn't be happy to have them.

Department Response: Please refer to response to comment VII(a) laws and rules.

XV. Jennie Brossart

- a. Comment: As a state that is largely comprised of agriculture, I believe we should do as much as we can to promote agriculture and encourage new farmers to start their business.

Department Response: Thank you for the comment.

- b. Comment: I don't believe that anyone should be allowed to stand in the way of this new hog farm as I only see this as a benefit to the community.

Department Response: Thank you for the comment.

XVI. Donald Boardman

- a. Comment: There are other hog farms in ND and they do not pose a health and safety problem for anyone in the communities they are located in. Why should it be opposed near Buffalo?

Department Response: Thank you for the comment.

XVII. Chelsea Monda

- a. Comment: My concerns begin with the fact that this project was kept very quiet, obviously with little interest in educating or collaborating with the citizens of Buffalo and surrounding rural areas.

Department Response: The North Dakota Department of Health received Rolling Green's application for approval of livestock waste system on September 8, 2015. The final completed application was received on December 18, 2015. The Department began reviewing system design, the NMP, site location, and advised them as to where changes needed to be made in their plans before we could issue public notice on December 28, 2015. After public notice was issued, there was a 30-day public comment period. The Department received enough interest to issue a second public notice on February 1, 2016. The second notice stated that an informational meeting followed by a public hearing would take place in Buffalo, ND on March 17, 2016 in regard to Rolling Green. Both public notices were published in the Fargo Forum and sent to the Postal Service in Buffalo, ND and the Cass County Auditor's office to be posted. The notices were also posted on the Department's website, and a notice was sent to an email list of subscribers. The notices were also mailed to other government agencies. The Department followed all requirements for public participation as outlined in NDAC § 33-16-03.1-13 - Public participation.

- b. Comment: News seemed to break just prior to the deadline for submission of letters of opposition.

Department Response: Please refer to response to comment XVII(a) public notice.

- c. Comment: This does not appear to be a community friendly approach or one that shows concern for the local residents.

Department Response: Thank you for the comment.

- d. Comment: Air and water pollution, health hazards and quality of life are the three prime considerations and concerns to the citizens of this area.

They should be concerns as well to the state of North Dakota and the North Dakota Department of Health.

Department Response: The North Dakota Department of Health has the authority to issue an Approval to Operate under the NDCC § 61-28-04. Department approval addresses the health and environmental concerns relating to protecting air quality and water quality. Rolling Green must meet the setbacks and rules of the Department before an Approval to Operate is granted. In regard to quality of life, this is beyond the scope of the proposed permit and outside the Department's authority.

XVIII. Judith Von Bank

- a. Comment: The odor.

Department Response: The facility will be subject to NDCC § 23-25-11, which addresses setback distances, and NDAC § 33-15-16-02, which regulates odor. For more information on NDCC § 23-25-11, please refer to response to comment I(b) setbacks. NDAC § 33-15-16-02(2) makes it unlawful to "discharge into the ambient air any objectionable odorous air contaminant that causes odors that measure seven odor concentration units or higher" as measured at a prescribed location. But, "[a] person is exempt from this section while spreading or applying animal manure or other recycled agricultural material to land in accordance with a nutrient management plan approved by the department." NDAC § 33-15-16-02(3). If odors in violation of the standards prescribed in this rule are found, an enforcement action can be taken to address those odors.

- b. Comment: Flies and diseases.

Department Response: Please refer to response to comment X(a) antibiotics. The Department performs an annual inspection of all CAFO (concentrated animal feeding operation) permitted facilities. These facilities are inspected to ensure permit compliance is maintained; i.e., the facility is maintaining livestock numbers in accordance with the permit; the facility is spreading manure in accordance with the NMP; the facility is maintaining its manure management system; the facility is handling its mortality properly; and odor readings, along with observation of nuisances (such as flies), are conducted. The facility will also have an inspection plan which includes daily, weekly, and monthly time frames.

- c. Comment: Our gravel roads that they will be hauling on with feed and hauling hogs.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- d. Comment: Will our property have the value it has now. Decrease to land value.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- e. Comment: What people will they hire to work there? It's a safety question when you are my age.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

XIX. Joan Boyd.

- a. Comment: I believe it would be harmful to the growth of our community, as we have had several families from Fargo/West Fargo move out to this area and buy/build homes. Not only in Buffalo, but along this County 3 Road.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: Contamination of underground water.

Department Response: The site location and design of this facility indicate a low potential for groundwater quality impacts. Liquid manure will be kept in a concrete pit under the barns, and any shallow groundwater under these pits will be removed using a drain tile system. The water from the drain tile will be sampled and tested annually to determine that no leak in the concrete pits has occurred. A condition requiring this annual sampling has been added to the permit. The facility does not appear to be located over a delineated glacial drift aquifer as indicated by the *Ground Water Studies 8, Geology and Ground Water Resources of Cass County, North Dakota, Part III*. There are no public wells indicated in the county groundwater studies and, according to the North Dakota State Water Commission, within the 2-mile radius. The nearest private wells identified are further than a mile away and range from 50 to 800 feet deep. Wells in the general area are from 29 to 900 feet deep. Note the "Aquifers" and "Groundwater Monitoring Plan" sections of the fact sheet have been updated.

- c. Comment: Manure management.

Department Response: Please refer to response to comment VIII(b) manure application.

- d. Comment: Odor.

Department Response: Please refer to response to comment XVIII(a) odor.

- e. Comment: My husband and I owned/operated our own farrow-to-finish hog operation for 15 yrs. Although much smaller than this operation, we still had to manage the manure and odor. Even though we kept our facility clean and well maintained and the manure pit used liquid bacteria, we had odor.

Department Response: Please refer to response to comment XVIII(a) odor.

XX. Sandra Cromwell

- a. Comment: Deep concerns of the quality of air.

Department Response: The Department's Division of Air Quality has prepared a memorandum explaining its evaluation of hydrogen sulfide, ammonia and odor setbacks (attached as Appendix A and incorporated herein). As explained in the memorandum, the Rolling Green facility must comply with the applicable requirements of the North Dakota Air Pollution Control Rules. Enforcement is a tool the Department will exercise if the facility does not maintain compliance with NDAC § 33-15-16 (Appendix A).

- b. Comment: Deep concerns of water quality.

Department Response: Please refer to response to comments XVII(d) air, water and quality of life, XIX(b) groundwater, and VIII(b) manure application.

- c. Comment: Deep concerns of life.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- d. Comment: Have lung cancer that I am receiving chemo and radiation therapy for.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- e. Comment: If air becomes too polluted there will not be an option but to use the oxygen at great risk of short time of life.

Department Response: Please refer to response to comments XVIII(a) odor and XX(a) air quality.

XXI. Vicki Wendt

- a. Comment: I adamantly oppose the construction and operation of the proposed 9,000-hog site due to the obvious stench that large hog farms produce.

Department Response: Please refer to response to comments XVIII(a) odor and XX(a) air quality.

- b. Comment: I am greatly concerned about how this will affect my quality of life as well as my property value.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- c. Comment: And, even worse, plans for disposing manure into farmland includes land a half mile behind my house! In fact, per field drawings provided by your office, fields 10, 20 and 21 are all within a mile of my house. That's 305.5 acres right around my house that are planned for being covered in hog manure!

Department Response: Please refer to response to comment VIII(b) manure application. Odors will be reduced by using injection and incorporation. A condition has been added to the permit to require injection or incorporation within 8 hours.

XXII. Jacqueline Marcks

- a. Comment: No one has talked to me about the drainage over my land. Then it goes onto Interstate 94 ditch, under the highway and on.

Department Response: Please refer to response to comments XIX(b) groundwater and XXIV(c) runoff. No liquid manure shall leave the site in the form of runoff as stated in Section 7.2(1) of the *North Dakota Livestock Program Design Manual*. See NDAC § 33-16-03.1-08 requiring compliance with the North Dakota Livestock Program Design Manual.

- b. Comment: It would affect the air quality for us, the condition of Howe township road that passes it, possibly flies.

Department Response: Please refer to response to comments XVIII(a) odor, XVIII(c) roads, XX(a) air quality, XXXIII(a) hydrogen sulfide and ammonia, and XVIII(b) flies.

- c. Comment: I live about 1 ½ miles away and have a lot of health problems.

Department Response: Please refer to response to comment XXXV(d) human health.

XXIII. Robert Von Bank

- a. Comment: I have lived here all my life and have valued the fresh air that I have lived with. I feel no one has the right to contaminate my fresh air with the smell of hogs. I have problems breathing, because I have asthma.

Department Response: Please refer to response to comments XVIII(a) odor, XX(a) air quality, and XXXV(d) human health.

- b. Comment: I wouldn't want a bunch of trucks going by here with dust and wrecking the roads.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- c. Comment: I think it could destroy our property values, and people would not want to build homes because of the smell.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

XXIV. Stephanie Baasch

- a. Comment: We built a new home one and a half miles south of Buffalo on County Road 38. The home is appraised at half a million dollars. Having this hog farm 2 miles east would certainly decrease the value of the home for resale.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: We are retired, but when we farmed (my husband farmed), he raised hogs. There is nothing worse than the smell of hogs, and I know we will be able to smell "pigs!"

Department Response: Please refer to response to comment XVIII(a) odor.

- c. Comment: Since we have farm land around that area, runoff is a worry.

Department Response: The *North Dakota Livestock Program Design Manual* - Section 7. Nutrient Management Plan, addresses the following: Manure storage and handling systems are designed to prevent manure and manure runoff from reaching any drainage. Over-application of nutrients, whether in the form of commercial fertilizer or manure, can lead to water quality impacts to surface waters. However, application of nutrients can have minimal environmental impact if the nutrients are

properly applied at agronomic rates. The application rates of manure and nutrients are monitored to ensure nutrients are applied in a manner so as not to impact waters of the state. The use of buffer strips can also reduce loading into rivers and streams. The use of a toolbar to inject manure directly into the soil also reduces the potential for nutrients to reach waters of the state. Please refer to response to comment VIII(b) manure application. Under NDAC § 33-16-03.1-08(3), Rolling Green's NMP must be consistent with the North Dakota Livestock Program Design Manual. Note the "Runoff" section of the fact sheet has been updated to reflect the comments received.

- d. Comment: What about the effects on underground water? That is our source of water, and heaven forbid should that become contaminated.

Department Response: Please refer to response to comment XIX(b) groundwater.

- e. Comment: How about the competition of the fertilizer with our local fertilizer dealers?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

XXV. Roy Thompson

- a. Comment: When Jack Rabbit farm was started in Madville, SD the neighbors were told the same thing, some odor at certain times. They are now living a nightmare we hope to avoid, check this out at [MadvilleTimes.com/Jack Rabbit Farms](http://MadvilleTimes.com/Jack Rabbit Farms).

Department Response: Please refer to response to comment XVIII(a) odor. While the State of North Dakota has odor rules to address nuisance odors, the State of South Dakota does not.

- b. Comment: They are hoping to run this farm, or factory let's call it, on two wells, a couple neighbors had small hog operations a few years ago and had to pipe in rural water as the well water was too high in salts for the hogs to do well.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- c. Comment: We are not set up for the truck traffic, which is already bad at times.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- d. Comment: We are not set up for the influx of workers.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- e. Comment: Housing is in short supply here.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- f. Comment: What will they do with the liquid manure when the ground freezes and it can't be dug in?

Department Response: The *North Dakota Livestock Program Design Manual* - Section 7. Nutrient Management Plan addresses the following: Manure shall not be applied to frozen, snow-covered or saturated soils if there is a likelihood of runoff. The facility will be limited to injection or incorporation of the manure, which is not possible into frozen ground. Conservation measures, such as manure field injection and setbacks from drainage areas, are effective at reducing runoff and are included in the facility's NMP.

Rolling Green Family Farm's manure application rate plan: Liquid manure will be land applied spring, summer, or fall by either injection or incorporation within 8 hours directly into the ground by a custom applicator. Manure will be land applied at a rate not to exceed high phosphorus levels so it will be utilized for crop production and so manure will not get into waters of the state. The NMP is required under NDAC § 33-16-03.1-08(3), Rolling Green's NMP must be consistent with the North Dakota Livestock Program Design Manual.

XXVI. Shelia Thompson

- a. Comment: My husband has done research about an operation they started in SD, and how people there are now living the "nightmare."

Department Response: The regulatory staff from both the Minnesota Pollution Control Agency and the South Dakota Department of Environment and Natural Resources have advised the North Dakota Department of Health there are no enforcement actions, past or present, against any Pipestone operations in either state.

- b. Comment: We have a great quality of life here and that would all end. I can't even imagine the stench and trying to be outside. A big operation like this does not belong here.

Department Response: Quality of life determination is beyond the scope

of the proposed permit and outside the Department's authority. Please refer to response to comment XVIII(a) odor.

- c. Comment: It would affect so many things the odor, the traffic, trucks, huge buildings, noise, water, and land quality.

Department Response: Please refer to response to comments XVIII(a) odor and VIII(b) manure application. The others are beyond the scope of the proposed permit and outside the Department's authority.

XXVII. Perry and Diana Moser

- a. Comment: I'm in favor of the proposed hog farm near Buffalo that was in the news this week. If the family has met all the requirements of the Health Department, they should be able to grow their business.

Department Response: Thank you for the comment.

XXVIII. Teresa Dvorak

- a. Comment: I support the proposed pig farm near Buffalo, ND. Businesses that have met all the Health Department regulations should not be penalized because of fear mongering and a "not in my backyard" mentality. Let agriculture continue to grow and support ND.

Department Response: Thank you for the comment.

XXIX. Shane Gunderson

- a. Comment: I support approval of the hog farm.

Department Response: Thank you for the comment.

XXX. Joan Boyd

- a. Comment: Decrease to land value.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: Contamination of underground water.

Department Response: Please refer to response to comment XIX(b) groundwater.

- c. Comment: Manure management.

Department Response: Please refer to response to comment VIII(b)

manure application.

- d. Comment: Odor.

Department Response: Please refer to response to comment XVIII(a) odor.

XXXI. Alan Dostert

- a. Comment: My concerns revolve around two primary issues (with several lesser issues that I won't address here). Those issues are; potential runoff and environmental issues with odors.

Department Response: Please refer to response to comments XVII(d) air, water, and quality of life, XVIII(a) odor, XXIV(c) runoff, and XXV(f) frozen ground.

- b. Comment: What occurrence of a 100 year event has historically occurred in this area of Cass County?

Department Response: Currently, FEMA does not have a flood map for this area of Buffalo, ND. The 100-year, 24-hour rainfall event for Cass County is 5.2 inches.

- c. Comment: What assurances are in place to protect the environment if the management of this facility were to "overflow" or otherwise mismanage the capacity of the holding structures?

Department Response: An overflow of the storage structure would be a serious violation that would require immediate remedial action and would result in enforcement action. The facility would be subject to the penalties allowed in law under NDCC § 61-28-08. The Department will perform an annual inspection of Rolling Green. The manure pits of the Rolling Green barn have manure storage for 365 days of storage, which is greater than the minimum requirement of 270 days of storage according to the *North Dakota Livestock Program Design Manual* - Section 5.2. Required Manure Storage as required by NDAC § 33-16-03.1-08. To date, no large swine manure pit overflow cases have been reported to the department.

- d. Comment: Of a much greater concern are the odors that emanate from such operations.

Department Response: Please refer to response to comment XVIII(a) odor.

XXXII. Amon Baer

- a. Comment: North Dakota is in need of diversifying the agricultural base of

the economy and livestock development can play a key role. The size of this operation will add many millions of dollars to the local economy of western Cass County.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

XXXIII. Andrew Fraase

- a. Comment: I have a concern that this farm could have negative air quality impacts to my family, which could result in health issues.

Department Response: In regard to air quality the Department has both hydrogen sulfide (H<sub>2</sub>S) and odor rules that all facilities must follow in addition to meeting ambient air standards. The ambient air standards are established to prevent adverse health effects. Please refer to response to comments XVIII(a) Odor, XXXIII(a) hydrogen sulfide and ammonia, XX(a) Air Quality and XXXV(d) human health.

- b. Comment: I am concerned that when the small containment pond at this farm overflows, that contaminated water will cause impacts to neighbor's farmland.

Department Response: Liquid manure will be stored in underground concrete manure pits; no water that comes into contact with manure will be stored outside. Groundwater from the drain tile system will be pumped into the clean water diversion. The water that is routed into the diversion is stormwater runoff and drain tile groundwater. The stormwater will not come into contact with the waste located in the pits under the barns or other sources of process waste. These facility requirements are found in NDAC § 33-16-03.1-08.

- c. Comment: I am disappointed in the permitting process in the state of North Dakota. I believe that the setback distance for the nearest home should be greater than 0.5 miles, and personally being less than 1.5 miles from the proposed farm, I believe it should be greater than that distance as well.

Department Response: Please refer to response to comment I(b) setbacks.

- d. Comment: I also believe that when a farm of this footprint is applying to construct somewhere new, like in this situation, that there should be a mandatory informational meeting required for all local public.

Department Response: While an informational meeting is not a requirement of the permitting process, the Department does believe it is

important to share information on the proposed facility.

- e. Comment: Increased truck traffic on the route my family and I drive is a safety concern that we would have to live with and be cautious of for the rest of our lives.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

XXXIV. Antoinette Fraase

- a. Comment: Why would investors and a company like Rolling Green Family Farms come to North Dakota to invest?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: Has Rolling Green Farms ever had problems in other places with hog farms that they have established?

Department Response: The Department contacted Minnesota and South Dakota permitting authorities and neither state has had issues with Rolling Green's partners, Pipestone Systems.

- c. Comment: Why has this all been kept quiet with only a very few people knowing what was going to happen?

Department Response: Please refer to response to comment for XVII(a) Public Notice.

- d. Comment: Why did the local investor in Buffalo not want such a meeting and did nothing to advertise it?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- e. Comment: Why have officials in Bismarck known about this for almost a year and also kept it quiet?

Department Response: Please refer to response to comment XVII(a) public notice.

- f. Comment: Why didn't the Cass County Commission know about this project?

Department Response: The Cass County Auditor was sent a copy of the public notice on the same day that the notice went out to the Fargo Forum. Please refer to response to comment XVII(a) public notice.

- g. Comment: Why wouldn't the local family who has sold the land for this project have visited with their lifelong neighbors and friends?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- h. Comment: Why were the contracts already signed for farmers who were to receive fertilizer from this project and Rolling Green Farms refused to give us the names?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- i. Comment: Why would Rolling Green Farms attend our meeting with an attorney?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- j. Comment: Why would they harass Mr. Randy Coon, a man from our community, while he was trying to speak on our behalf at our meeting?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- k. Comment: Why was his job threatened two days later by the Executive Director of a very important ND agriculture organization?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- l. Comment: Why did it take so long for the NDDH to listen to our concerns and finally grant us some time to collect information and have a public hearing?

Department Response: The Department followed the proper procedure in regard to the public comment. Once the Department received the many requests to hold a public hearing, the Department scheduled another public notice in which an information session followed by a public hearing was announced to be held in Buffalo, ND. Please refer to response to comments VII(a) laws and rules and XVII(a) public notice.

- m. Comment: Who will consider the other issues like land devaluation, increased truck traffic, wear and tear on county roads, and quality of life?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- n. Comment: I wonder who is going to inspect this operation and how often?

Department Response: The Department has three (3) full time employees involved in the CAFO permitting program: an engineer, a geologist, and an environmental scientist. They inspect all of the CAFOs throughout the state annually. If they need further assistance with inspection, water monitoring, and odor readings, there are employees from the divisions of Water Quality, Air Quality, and Waste Management that can assist them. They may also ask the local health district for further assistance. Please refer to response to comment XVIII(b) inspections.

- o. Comment: What will happen if there are violations?

Department Response: Please refer to response to comment XXXI(c) enforcement.

- p. Comment: How many people are working to keep track of farms like Rolling Green in our state?

Department Response: Please refer to response to comment XXXIV(n) CAFO Program.

XXXV. Arnetta Frueh

- a. Comment: I have deep concern of the quality of air, water and life if this CAFO is permitted in this area.

Department Response: Please refer to response to comments XX(a) air quality, XXIV(c) runoff, and XXV(f) frozen ground.

- b. Comment: Concern of decrease in property value.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- c. Comment: We have the City of Buffalo within 3 miles with K-3<sup>rd</sup> grade school age children, a preschool, and a daycare all within the radius of harm according to the CDC.

Department Response: The CDC (Centers for Disease Control) article addressed areas of high density of people and the number of large CAFOs in close proximity where there is no local zoning. State odor setbacks in NDCC § 23-25-11 prohibit facilities from being located in such a close proximity. Please refer to response to comment XXXV(d) human health.

- d. Comment: As far as air control the pathogens that will be in the air are deadly to my well being.

Department Response: The Department has reviewed numerous studies presented (Appendix B). The applicability of these studies to the proposed site can be affected by facility design, operations and maintenance, applicable state and local rules in addition to site specific conditions such as geology and meteorology. Also, how the studies are designed and conducted can affect how the results can be compared to other situations. State regulations have been developed through a public process to address many environmental and health issues discussed in the various studies, such as required setback from residences, statewide odor standard, and nuisance hydrogen sulfide standard. It has not been shown that these protections are inadequate nor that applicable health standards are likely to be exceeded.

XXXVI. Cameron Gilley

- a. Comment: I am worried that the new farm will produce large quantities of waste that will contaminate groundwater, and also spread *E. coli* and Salmonella.

Department Response: Please refer to response to comments XIX(b) groundwater and XXXV(d) human health.

XXXVII. Candace Shultz

- a. Comment: Air and water pollution are obvious environmental issues with an operation of this scope.

Department Response: Please refer to response to comments XX(a) air quality, XIX(b) groundwater, and XXIV(c) runoff.

- b. Comment: Research shows that pathogens, to include salmonella and *E. coli*, are present in hog waste, certainly a concern to public health.

Department Response: Please refer to response to comment XXXV(d) human health.

- c. Comment: In addition, ammonia and hydrogen sulfide, which cause respiratory problems, are released into the air. These conditions will expose the surrounding area to health risks, and the level of drift cannot be fully determined.

Department Response: Please refer to response to comments XX(a) air quality and XXXIII(a) hydrogen sulfide and ammonia.

- d. Comment: Quality of life is a final concern.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

XXXVIII. Carol Beaton

- a. Comment: Pigs smell and the effect of the foul odor will be an issue for more than the immediate area.

Department Response: Please refer to response to comment XVIII(a) hydrogen sulfide and ammonia.

- b. Comment: In addition to the unpleasantness, exposure to ammonia, hydrogen sulfide and organic dust are known to have adverse effects on respiratory health.

Department Response: Please refer to response to comments XX(a) air quality and XXXIII(a) hydrogen sulfide and ammonia.

- c. Comment: Water quality may be affected.

Department Response: Please refer to response to comments VIII(a) odor, VIII(b) manure application, XXIV(c) runoff, and XXV(f) frozen ground.

- d. Comment: The high concentration of swine will increase the health risks from pathogens. In maintaining the interior environmental conditions, pathogens are trapped and increase the risk of respiratory conditions, such as asthma, for workers. Research is also being done to identify the impact on neighboring areas.

Department Response: Please refer to response to comment XXXV(d) human health. You may also reference the Occupational Safety and Health Administration (OSHA) in regard to worker safety.

XXXIX. Carolyn Dostert

- a. Comment: The large number (roughly 10,000 pigs) will affect the surrounding area with a horrendous smell that will definitely affect the farms located near the proposed site and the city of Buffalo.

Department Response: Please refer to response to comment XVIII(a) odor.

- b. Comment: The drainage coming across the property will directly affect our property and from our land it will drain right onto the I-94 ditches.

Department Response: Please refer to response to comments XXIV(c)

runoff and XXV(f) frozen ground.

- c. Comment: It is my understanding that Rolling Green Family Farms will be drilling wells on the property to supply the water it needs. The wells on the surrounding farms are artesian (which to my knowledge isn't good for animals), so how will they get fresh water? Our rural water system was not installed to handle the amount of water needed to supply large feed lots, so how will that issue be handled? Will we have to pay for a new water system for someone else's business?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority. Note the "Public Wells" section of the fact sheet has been updated.

XL. Carolyn Pfeifer

- a. Comment: The odor, air quality, and water pollution will be unacceptable, and will make it difficult to have a normal atmosphere in which to work and play.

Department Response: Please refer to response to comments XVIII(a) odor, XX(a) air quality, and XXXIII(a) hydrogen sulfide and ammonia in regard to odor and air quality. In addition, refer to comments XXIV(c) runoff, XXV(f) frozen ground, XIX(b) groundwater and L(a) waterway in regard to water quality.

XLI. Marlene Sheldon

- a. Comment: Charles has COPD and it is crucial that he has healthy clean air to breathe. It could limit his time outdoors or even having our windows open.

Department Response: Please refer to response to comments XX(a) air quality and XXXV(d) human health.

- b. Comment: It has been found that there is an association between living in proximity to high density livestock production and community-acquired infections with methicillin-resistant staphylococcus aureus, known as MRSA.

Department Response: According to the CDC, MRSA is spread by skin-to-skin contact, shared equipment or supplies, and places that involve crowding with an infected source; MRSA is not spread through the air. Please refer to Appendix C for article on MRSA. The Department recommends that you visit with your physician for more information. Please refer to response to comment XXXV(d) human health.

- c. Comment: What about our water supply and roads? Will there be enough water?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

XLII. Claudia Von Bank

- a. Comment: I'm very much concerned about the quality of our air and eventually our water if a pig farm is placed close to us.

Department Response: Please refer to response to comments XX(a) air quality, XIX(b) groundwater, and XXIV(c) runoff.

XLIII. Corey Hovelson

- a. Comment: We are concerned with the air and water quality that the farm is going to produce.

Department Response: Please refer to response to comments XX(a) air quality, XIX(b) groundwater, and XXIV(c) runoff.

- b. Comment: We are concerned that there are going to be pipes running approximately five miles from the hog farm that the waste is going to be traveling through.

Department Response: Rolling Green will be injecting or incorporating within 8 hours, liquid manure into fields during the spring, summer, and fall. They will monitor pipes while pumping manure to ensure that no leaks occur. When field injection is completed, pipes will be removed. If unable to pump liquid manure to fields, Rolling Green will use tankers and haul it. This is established in NDAC § 33-16-03.1-08 - Facility Requirements.

- c. Comment: Are these hog farmers going to make sure all the waste gets pumped on time and doesn't overflow on frozen land and end up in the Maple River?

Department Response: Please refer to response to comments XXIV(c) runoff, XXXI(c) enforcement and XXV(f) frozen ground.

- d. Comment: Also, there is to be 17-20 jobs with this hog farm. Where are they going to live?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

XLIV. Craig Wendt

- a. Comment: Specifically, we are concerned about the owner's efforts and success at controlling the manure produced by such a facility. What measures would be taken to ensure surface and ground water quality?

Department Response: Please refer to response to comments XVIII(a) odor, VIII(b) manure application, XXXI(c) enforcement, and XXXIII(b) the containment pond.

- b. Comment: Would those measures be monitored and enforced?

Department Response: Please refer to response to comments XXXI(c) enforcement and XXXIV(n) CAFO Program.

- c. Comment: We are also concerned about air quality. The high concentration of livestock creates a decidedly unpleasant and possibly unsafe environment for those working in the facility and living all around it.

Department Response: Please refer to response to comments XX(a) air quality and XVIII(a) odor.

XLV. Dallas Hager

- a. Comment: If all of the requirements by the health administration have been met, then the concern of smell should carry little weight as this too can be minimized.

Department Response: Please refer to response to comments I(b) setbacks and XVIII(a) odor.

XLVI. Danielle Fraase

- a. Comment: A concern I have with the location of this site is the increased traffic on the road that I drive daily. In the future, this would affect not only myself, but my family. I need to be reassured the road conditions would be routinely monitored and the traffic speed be enforced.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: I am worried about the odor and the potential hazardous air quality that would be leaving the farm.

Department Response: Please refer to response to comments XVIII(a) odor and XX(a) air quality.

XLVII. David Percel

- a. Comment: My concerns in granting a permit are based on the presence of pathogens in the liquid waste generated by this facility, the application, (type of soil, topography and weather conditions when applied) and the lack of long term monitoring of the groundwater and soil. Information is included on one type of pathogen (MRSA and other types of staph bacteria: research from Johns Hopkins Bloomberg School of Public Health).

Department Response: The Department rules and regulations require an NMP be followed. This NMP ensures the least amount of environmental impact to the area. Please refer to response to comments VIII(b) manure application, XXIV(c) runoff, and XXV(f) frozen ground in regard to the NMP and the prevention of runoff. Please refer to response to comment XLI(b) MRSA.

- b. Comment: From email exchanges with the Dept. of Health you do not have adequate regulations with regard to this type of operation and the waste it will create.

Department Response: The state has had AFO and CAFO regulations in place since the 1960s. The most recent regulations in regard to permitting were updated in 2005. Current regulations encompass all AFOs and CAFOs in the state.

XLVIII. EeJay Smith

- a. Comment: Public notice was during a busy time (Holidays) and most in the community have indicated that they have not had time to adequately investigate.

Department Response: Please refer to response to comment XVII(a) public notice in regard to the timeline for a public notice.

- b. Comment: The application indicates that they will compost dead animals. My understanding is that there are to be over 6000 (possibly up to 9000) animals. 10% death events are not unheard of in such operations. I would like to hear their plan to deal with the dead animals.

Department Response: Rolling Green and its partners have experienced a death loss of 6 percent on average at their other sites. The pigs will be composted in a nine-bunker, enclosed, concrete composting barn. Compost piles will be maintained at a temperature of 120-160 degrees Fahrenheit (F) until pig mortality is completely broken down. The high heat sterilizes pathogens and seeds that may be present in the pile. After the pile is completely broken down, it may be used as fertilizer on

cropland. If there is a large outbreak at the facility and major death loss occurs, Rolling Green will have the mortality shipped to a rendering facility. This is established in NDAC § 33-16-03.1-08 - Facility Requirements as it relates to Section 6.4 of the *North Dakota Livestock Program Design Manual*.

- c. Comment: The site ultimately drains into the Red River. I'm not convinced that this application does not need to be reviewed/approved by Canadian officials. If the drainage project from Devils Lake is a concern to Canadian officials, it would seem that this might be as well.

Department Response: Some Canadian companies, along with governmental agencies, are on the Department's email/mail notification list. The Department's mailing list includes Manitoba Water Stewardship and Saskatchewan Ministry of Environment. By the end of the comment period, the Department had not received any Canadian comments on the proposed facility.

- d. Comment: Amount of nitrates in run-off from manure that is to be incorporated in local fields may have at least temporary effect in water quality.

Department Response: As long as the requirements of the NMP are followed, any effects to water quality will be minimized. Please refer to response to comments VIII(b) manure application as it pertains to the NMP. In addition, refer to the NMP and response to comments XXIV(c) runoff and XXV(f) frozen ground as they pertain to runoff.

- e. Comment: There does not appear to be adequate property local to the site (north of I94 and South of the Railroad) to accept the volume of liquid manure. The applications suggest that monitoring will take place to prevent more manure from getting applied than the property can properly use. However, what happens if manure production exceeds this? What is the plan to make use of this product?

Department Response: Based on a rotation of corn and soybeans, Rolling Green requires more than 3,179 acres. A total of 5,725.52 acres have been obtained for manure application. Soil tests, manure nutrient tests, and crop yield goals are required to apply manure. If there is an abundance of nutrients on the field they choose for manure application, a different field must be chosen or crop rotation changed. This is established in NDAC § 33-16-03.1-08 - Facility Requirements, as it relates to Section 7.5 of the *North Dakota Livestock Program Design Manual*.

- f. Comment: Expected manure volumes section does not address the nitrates/nitrites that will be present in pig manure. How will this be mitigated and kept from State waters?

Department Response: Please refer to response to comments XLVIII(e) manure quality and VIII(b) manure application.

- g. Comment: Site is located in a site that will drain surprisingly fast ultimately into the Red River. Any accidents would be hard to contain since they are right on the Buffalo River waterway.

Department Response: Please refer to response to comment XXIV(c) runoff, XXV(f) frozen ground, and XXXIII(b) the containment pond. If a spill were to occur, the facility is required to report to the Department and take immediate action to contain the spill. This is established in NDAC § 33-16-03.1-08 - Facility Requirements, as it relates to Section 9 of the *North Dakota Livestock Program Design Manual*.

XLIX. Eric Lien

- a. Comment: In one case 2010 the University of Iowa and Kent State did complete a study at the Iowa Veterans Center and checked over 1000 patients. Finding that these rural patients between 2010 and 2011. Showing that they are 3 times more pervious to these types of infections being located near to these CAFO style farms holding more than 2500 head of livestock (The size of the farm near Buffalo is 9000 head). The Authors led by Margaret Carrel (PHD), initially identified just under 3000 patient admissions in that two year period and then windowed out any patients who lived in the cities as well as those addresses could not be confirmed and plotted using GEO Coding. That left them with 1746 samples taken from 1036 patients of which 119-(6.8 percent) were positive for MRSA.

Department Response: Please refer to response to comments XLI(b) MRSA and XX(a) air quality.

- b. Comment: Another study from John Hopkins University in conjunction with the University of North Carolina showed that 86% of the hog workers carried the MRSA. In 2012 Steve Wing an epidemiologist from North Carolina also studied the correlation between these CAFO style farms and high blood pressure due to air quality. He did this by using mobile monitoring equipment. Measuring the air quality with hydrogen sulfide. This was being published in the Environmental Health Perspectives.

Department Response: Please refer to response to comment XLI(b) MRSA and XXXIII(a) hydrogen sulfide and ammonia.

- c. Comment: In 2014 a study from the Institute of North Carolina and Clinical Sciences Institute did a study linking the CAFO style hog farms to the transmission of MRSA and others being a threat to humans. It was

backed by the UNC Public Health-Nursing Institute.

Department Response: Please refer to response to comment XLI(b) MRSA.

- d. Comment: Chapel Hill, NC has a similar operation as what is being purposed in Buffalo, ND. People near the CAFO style farm in North Carolina, have reportedly suffered from headaches, diarrhea, and respiratory problems according to a study by researchers at the University of NC. These hog farms emit hydrogen sulfide. This is a gas that most often causes flu-like symptoms in humans, large concentrations have been attributed to brain damage. The National Institute of Health reported that 19 people died as a result of hydrogen sulfide.

Department Response: Please refer to response to comments XX(a) air quality.

- e. Comment: The vast amount of sewage gas, with 70% being methane and 29% carbon dioxide. The methane being about half of the chemical weight of air. Will cause a lingering effect to the area. Dispersed by the warm southern winds in the summer time blowing directly to the town and a more lingering effect in the winter. Ammonia is also a toxic form of nitrogen released in gas form during waste disposal and it can carry more than 300 miles through the air before settling in the ground or lake, and rivers. Where it will cause an algae bloom, killing most aquatic animals.

Department Response: Carbon dioxide and methane concentrations at levels found in outdoor air are not known to cause a health risk. The Department is not aware of any significant ammonia deposition from industrial facilities which produce much greater ammonia emissions than will the proposed Rolling Green facility. Please refer to response to comment XX(a) air quality.

- f. Comment: High levels of nitrates go hand in hand with large livestock operations. These high levels of nitrates in drinking water increase the risk of methemoglobinemia (Changes in red blood cells) or blue baby syndrome.

Department Response: By following NDAC § 33-16-03.1-08 - Facility Requirements, as it relates to the *North Dakota Livestock Program Design Manual*, nitrate spreading to a drinking water source is addressed. Please refer to response to comments XXIV(c) runoff, XXV(f) frozen ground, XIX(b) groundwater, VIII(b) manure application, and XXXIII(b) the containment pond.

- g. Comment: What were to happen to Pipestone's underground storage in the event of a flood that can last weeks?

Department Response: Currently, the Federal Emergency Management Agency (FEMA) does not have a flood map for the local area of Buffalo, ND. However, if an extended wet cycle were to happen, the facility's storage capacity will allow time for conditions to develop to allow land application to resume, as more than 365 days of storage will be provided. Refer to response to comments XXIV(c) runoff, XXV(f) frozen ground, and XXXIII(b) the containment pond.

L. Gerald Marcks

- a. Comment: The plans call for surface water to drain south onto my land and beyond. The proposal states the runoff will go south in a ditch and under a road. They do not say this, and road happens to be I94 a federal highway. Also this ditch doesn't drain out completely as the culverts are too high.

Department Response: Only clean water will be diverted around the property. All manure waste streams will be stored in pits under the barns. Manure runoff will be contained and land-applied. There will be no manure contact runoff from the facility. The fact sheet has been updated to reflect the drainage pattern.

LI. Gregory Sproul

- a. Comment: Specifically, we are concerned about the quality of life due to the odor, the environmental impact on the water and the devaluation of property values.

Department Response: Please refer to response to comment XVIII(a) odor. In addition, refer to response to comments XXIV(c) runoff, XXV(f) frozen ground, and XXXIII(b) the containment pond. Impacts on property values are beyond the scope of the proposed permit and outside the Department's authority.

LII. Gwen Fraase

- a. Comment: I do not understand why this proposal would even be a consideration in Cass County. Cass County is the fastest growing county in ND. So why place this facility in an area of potential growth?

Department Response: This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: If we have a quick freeze up in the fall, the liquid pig manure that is supposed to be injected into the soil will end up on top of the frozen ground, creating a strong odor for an extended period of time, and then subjected to the spring runoff.

Department Response: In response to manure spreading and runoff, please refer to response to comments VIII(b) manure application, XXIV(c) runoff, and XXV(f) frozen ground. Item sixteen in the “Approval to Operate” permit has a provision to ensure the containment system does not overflow, and to ensure manure or waste water does not discharge into waters of the state.

- c. Comment: Another concern is the upkeep and safety of the roads that will be used.

Department Response: This is beyond the scope of the proposed permit and outside the Department’s authority.

- d. Comment: I am also concerned that there will be enough regulations and supervision to monitor this facility before compliance is broken.

Department Response: In response to enforcement, compliance, and inspections, please refer to response to comments XXXI(c) enforcement and XXXIV(n) CAFO Program.

- e. Comment: Historically homes by confinement hog barns depreciate in value. How is this fair to the residents of Buffalo and the surrounding area?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department’s authority.

### LIII. Hal Grieve

- a. Comment: The unknowns of odor, and airborne health effects.

Department Response: Please refer to response to comments XVIII(a) odor, XXXIII(a) hydrogen sulfide and ammonia, XX(a) air quality, and XXXV(d) human health.

- b. Comment: Water quality and drainage are my concerns.

Department Response: Please refer to response to comments XXIV(c) runoff, XXV(f) frozen ground, and L(a) waterway.

- c. Comment: Other concerns are on the impact of other fertilizer businesses located in and around town losing business with little or no gain to the community.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department’s authority.

LIV. Jared Webster

- a. Comment: We question why a local farmer would sell his land to a large corporation and the news didn't become public until now.

Department Response: This is beyond the scope of the proposed permit and outside the Department's authority. Please refer to response to comment XVII(a) public notice.

- b. Comment: We are concerned because there is a drainage system that flowed from the land north of I94 to our land directly south of I94. We are concerned about the drainage that might affect water quality, the spread of disease, and odor.

Department Response: Please refer to response to comments XXIV(c) runoff, XXV(f) frozen ground, and L(a) waterway.

- c. Comment: We are equally concerned about the value of the land.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- d. Comment: Does this operation have a plan for disposal of dead animals and the placentas? Would these be a source for flies and possible disease?

Department Response: Rolling Green will be composting their mortality in a covered compost shed. The compost will then be spread on fields. During the composting process, the piles can reach anywhere from 120-160 degrees Fahrenheit, causing pathogens to be inactivated. This is established in NDAC § 33-16-03.1-08 - Facility Requirements, as it relates to Section 6.4 of the *North Dakota Livestock Program Design Manual*. For more information on concerns relating to disease, please refer to response to comment X(a) antibiotics.

LV. Jennifer Fraase

- a. Comment: If this pig operation is allowed to be built, it will destroy our fresh air not only from the manure being spread but from the odor that will come from having an operation with 9,000 hogs.

Department Response: In response to odor and air quality, please refer to response to comments XVIII(a) odor, XX(a) air quality, and XXXIII(a) hydrogen sulfide and ammonia.

- b. Comment: Manure can contain plant nutrients such as nitrogen and phosphorus, pathogens such as E coli, growth hormones, antibiotics, chemicals used as additives to the manure or to clean equipment, animal

blood and silage leachate from corn feed (Source: Understanding Concentrated Animal Feeding Operations and Their Impact on Community by Carrie Hribar, MA). From my reading on CAFO's and the cause of manure, I have found that there are over 150 pathogens found in animal manure which cause numerous disease and side effects. This is not something that I want to be exposed to, nor should our community be exposed to these pathogens.

Department of Health: The community will not be exposed to pathogens due to the control of runoff and the control of how manure will be spread on fields. For more information, please refer to response to comments VIII(b) manure application and XXXIII(b) the containment pond.

- c. Comment: Another concern with an operation of this size is the threat to groundwater and our aquifers.

Department Response: Please refer to response to comment XXXIII(b) the containment pond.

- d. Comment: According to studies done by Dakota Rural Action, they found that property within a 3 mile radius of a CAFO loses 6.6% in property valuation, and property within 0.10 miles of a CAFO loses up to 88% in property valuation. (~Dakota Rural Action, CAFO Economic Impact (June 2006)(citing North Central Regional Center of Rural Development (1999:46); Siepel et al. (1998)). I quote another study: A 1999 study in Missouri found that the average loss of land value within three miles of a CAFO was \$112/acres. ~Mubarak Hamed et al., The Impact of Animal Feeding Operations on Rural Land Values 2 (Cmty. Policy Analysis Ctr., Univ. of Mo., May 1999) (finding that "there is a relationship between proximity to a CAFO and the value of property").

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

LVI. Jessica Peterson

- a. Comment: How are they going to contain the smell?

Department Response: With any animal agriculture operation, there are going to be odors. Because of these odors, the state looks at setbacks from a facility to minimize any impact of these odors. Please refer to response to comments XVII(d) air, water, and quality of life, and VII(a) laws and rules.

- b. Comment: Where is all the drainage from the pigs runoff going to go?

Department Response: The liquid manure will be stored in underground

pits and will be injected onto fields in spring, summer, and fall.

- c. Comment: I'm concerned that our rural neighbors are going to suffer health consequences because the air quality would not be taken care of.

Department Response: Please refer to response to comments XX(a) air quality, XXXIII(a) hydrogen sulfide and ammonia, and XXXV(d) human health.

- d. Comment: Several swine infections can be transmitted to humans, some with potentially serious outcomes. 1KCRHS followed entire farm families living in a rural community over a period of 17 years to observe their health outcomes and identify health conditions, behaviors, and work duties that make injury and illness more likely. For example, KCRHS found that farm workers had the greatest risk of exposure to H1N1 and H1N2 (swine flu) infection, even greater than others who work with pigs (e.g., meat processing workers, veterinarians), since they come into contact with live pigs.<sup>2</sup> [www.farmsanctuary.org/learn/factory-farming/factory-farmings-effect-on-rural-communities/](http://www.farmsanctuary.org/learn/factory-farming/factory-farmings-effect-on-rural-communities/) and [www.cdc.gov/niosh/docs/2015-175/](http://www.cdc.gov/niosh/docs/2015-175/)

Department Response: The CDC has stated that human infections with influenza A viruses normally found in swine are rare events, but the frequency of such detections has increased recently. To help reduce the chance of contracting influenza, the CDC suggests management strategies such as vaccinating herds, using good biosecurity measures, practicing good hygiene, vaccinating pig caretakers with seasonal influenza vaccine, and using proper ventilation systems.

The Department recommends contacting your physician for more health care information and OSHA for workforce safety.

- e. Comment: Studies have discovered an increase in respiratory, neurobehavioral, and mental illness among the residents of communities next to factory farms. In a major study, residents in the vicinity of a large pig farm were found to have “higher reporting of headaches, runny noses, sore throats, excessive coughing, diarrhea, and burning eyes.” A separate study determined that pregnant women and children are especially susceptible to factory emissions.

Department Response: Please refer to response to comments XVII(d) air, water, and quality of life and XVIII(a) odor.

- f. Comment: Lagoons are also prone to spills, which can contaminate a community's water.

Department Response: This facility will not be using a lagoon. Manure will be stored in pits under the barns. Refer to comment XXXI(c) enforcement.

- g. Comment: Manure lagoons are known to release a number of air pollutants, including methane, a major greenhouse gas, and hydrogen sulfide, which the National Institute for Occupational Safety cites as a leading cause of death in the workplace.

Department Response: Please refer to response to comment LVI(f) lagoons. Please refer to OSHA for workforce safety and comment XX(a) air quality.

- h. Comment: Decrease in property value.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority

LVII. John Kringler

- a. Comment: As a landowner in Buffalo township SE ¼ Sec 20, I look forward to use of the manure as a fertilizer and increasing the organic matter of the soil. Therefore I am in favor of the hog facility project.

Department Response: Thank you for the comment.

LVIII. Jon Gilley

- a. Comment: The area around Pipestone, MN, where Pipestone Systems originated and continues to operate, has some of the worst groundwater nitrate levels in the state of MN.

Department Response: Nitrates in groundwater can come from several sources such as commercial fertilizers being applied to fields and overuse of fertilizers on lawns and gardens. The risk of nitrates leaching into groundwater can increase due to soil type and local geology. Pipestone, MN has geology which is highly susceptible to groundwater contamination. This area is comprised of low-yield crystalline bedrock which is vulnerable to contamination at or near the surface. However, no information has been found showing Pipestone Systems has caused any contamination.

- b. Comment: I am concerned that permitting Pipestone Systems to build this pig farm in Cass County would result in contamination of groundwater and surface water by nitrates and phosphates.

Department Response: Please refer to response to comments XXIV(c) runoff, XXV(f) frozen ground, XXXIII(b) the containment pond, and L(a) waterway. In addition, please refer to response to comment VIII(b) manure application.

- c. Comment: It would expose all of us who live here to odor, dust, molds,

bacterial endotoxins, and gases such as ammonia and hydrogen sulfide.

Department Response: Please refer to response to comments XVIII(a) odor and XX(a) air quality.

- d. Comment: It would negatively affect our quality of life and property values.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

LIX. John Reinhardt

- a. Comment: This farm is away from towns and other farms so it will not disturb anyone. Look at the jobs it will give people. Help with bringing children to schools and also people buying supplies for the farm and personal use.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

LX. Judith Von Bank

- a. Comment: First the odor, flies, and disease.

Department Response: Please refer to response to comments XVIII(a) odor, XX(a) air quality, and XXXIII(a) hydrogen sulfide and ammonia. In addition, please refer to response to comments X(a) antibiotics and XVIII(b) inspections.

- b. Comment: Second, our gravel roads that they will be traveling on with semis at least four times a week with feed and hauling their hogs.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- c. Comment: Third, will our property have the value it has now?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- d. Comment: What people will they hire to work there?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

LXI. Keith Biggers

- a. Comment: The most obvious concern is the smell.

Department Response: Please refer to response to comment XVIII(a) odor.

- b. Comment: While all animal activity results in odor, a look at a 2000 Wing and Wolf study in NC and a 2002 joint study by Iowa State University and University of Iowa reveal the hazard of this air pollution. Harmful effects included headaches, sore throats, diarrhea, coughing, and burning eyes.

Department Response: Please refer to response to comments XVIII(a) odor, XX(a) air quality, and XXXIII(a) hydrogen sulfide and ammonia.

- c. Comment: The second concern is water quality.

Department Response: Please refer to response to comments XXIV(c) runoff, XXV(f) frozen ground, XXXIII(b) the containment pond, and L(a) waterway.

- d. Comment: The third concern is the integrity of the company heading the hog operation.

Department Response: Please refer to response to comment XXXIV(b) compliance history.

LXII. Kimberly Von Bank

- a. Comment: Ammonia emissions from hog farms react with other gases to form fine particle pollution, a public health threat linked to lung function, cardiovascular ailments, and premature death. (please see my attached source sheet)

Department Response: Please refer to response to comments XXXIII(a) hydrogen sulfide and ammonia, and XXXV(d) human health.

- b. Comment: Air emissions from lagoons, spray fields, and hog houses have been linked to neurological and respiratory problems.

Department Response: Please refer to response to comments XX(a) air quality and XXXV(d) human health. Submitted plans and specifications do not show a lagoon system being constructed for storing or treating waste. Manure also will be injected or incorporated into the soil, not sprayed onto the field.

- c. Comment: Hydrogen sulfide emissions from hog farms have been associated with respiratory and cardiovascular effects.

Department Response: Please refer to response to comments XXXIII(a) hydrogen sulfide and ammonia, and XXXV(d) human health.

- d. Comment: Hog waste contains disease causing pathogens and increases antibiotic resistance.

Department Response: Please refer to response to comments X(a) antibiotics and XVIII(b) inspections.

- e. Comment: Evidence indicates adverse impacts on worker's and children's health.

Department Response: Please refer to response to comment XXXV(d) human health. Contact OSHA in regard to worker safety.

- f. Comment: Manure land application rates at hog AFOs result in high level of pollutants in groundwater and pose risks to drink water wells.

Department Response: Please refer to response to comments VIII(b) manure application, XXIV(c) runoff, XXV(f) frozen ground, and L(a) waterway.

LXIII. Lee Fischer

- a. Comment: What are the consequences to the environment and our community if all does not go as planned?

Department Response: Please refer to response to comments XXXI(c) enforcement and XXXIV(n) CAFO Program.

- b. Comment: What is the track record for Rolling Green Family Farms, who will be monitoring operating conditions and who will ultimately be held responsible for noncompliance and or any damage to the environment?

Department Response: Please refer to response to comments XXXIV(b) compliance history, XXXI(c) enforcement, and XXXIV(n) CAFO Program.

LXIV. Lee Fraase

- a. Comment: Of course odor is an issue.

Department Response: Please refer to response to comment XVIII(a) odor.

- b. Comment: What do you do with full pits the wrong time of year?

Department Response: Please refer to response to comments XXV(f)

frozen ground and VIII(b) manure application.

- c. Comment: Economic development? They have not found a feed mill yet. There are none close by. Don't you think they should get these answers before you give out a permit?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- d. Comment: Where are 17-18 full-time employees are going to live where?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- e. Comment: Think about all that traffic in and out on our gravel roads all over the township.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- f. Comment: Explain the facility description comments that should be received by December 23, when you did not release this public notice until December 28, 2015? The name is Rolling Green Family Farms RE, LLC?

Department Response: The Department did have two typographical errors -- on the date and when it printed LLC, instead of LLP, for the first public notice. We apologize for any inconvenience this may have caused. The Department did have this corrected in the second public notice that started on February 1, 2016.

- g. Comment: You see they got enough acres (3300 acres) (not right amount of acres) for the permit, but do you realize they will never put manure on those acres far away?

Department Response: Rolling Green has easements for spreading manure on 5,725.52 acres. Please refer to response to comment VIII(b) manure application. The NMP will be inspected every year by Department staff. Facility inspections are allowed under NDAC § 33-16-03.1-11 - Departmental inspections.

- h. Comment: What if some local farmers don't take it; they could be stuck with manure they don't know how to get rid of?

Department Response: Signed easements between landowners and Rolling Green require the landowners to accept the land application on their fields.

- i. Comment: They are trying to get permits to put hoses through state

highway 38 and I94 (culverts). They don't have those answers yet but they want the permit from you. I talked to Mr. Gilbertson (NDDOT Fargo section manager) he told me "no hoses in culverts" (safety issues).

Department Response: Where hoses can't be used, manure tankers may be used to transport manure.

- j. Comment: Did you know that there are three old farmsteads within a half mile of this site. I will draw you a map for section 4 and 5 in house Township 139-54?

Department Response: Old, abandoned farmsteads are not used when determining odor setbacks. Residences need to be occupied at the time of application evaluation. Please refer to response to comments XVIII(a) odor and XVII(d) air, water, and quality of life.

- k. Comment: This huge hog barn would be within a half mile of these potential wells that were not properly capped off. DOT filled it in, so before you grant any permit I would hope you would inspect those sites for wells that were just pushed over and not filled up properly. Wells that are not properly capped off can't be within a half mile of this barn.

Department Response: According to Section 4.2.1 of the *North Dakota Livestock Program Design Manual* as required by NDAC § 33-16-03.1-08, the furthest the facility needs to be from a public water supply well not owned by the facility is 500 feet. The Department also performed inspections of the sites, indicated by your comment, within the manure application areas and found only one well in Section 11 that will need to be properly abandoned prior to manure application. The Department will address other abandoned wells as they are brought to our attention. Note the "Public Wells" section of the fact sheet has been updated.

LXV. Liane Stout

- a. Comment: I need to understand more about the maintenance of the facility and how it is monitored for potential environmental issues, such as air quality, odor, water contamination, etc.

Department Response: Please refer to response to comments XXXI(c) enforcement and XXXIV(n) CAFO Program.

LXVI. Margaret Vollmuth

- a. Comment: Our concerns are water and waste management for such a large operation so close to neighboring homes and land.

Department Response: Please refer to response to comments XXXIII(b)

the containment pond and VIII(b) manure application.

- b. Comment: If the facility has up to 9000 hogs as part of this operation, will rural water be able to supply that amount of water without compromising the water use of other local patrons?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- c. Comment: How will diseased and dead animals be dealt with to avoid odor, flies, and contamination of land, air, and water?

Department Response: Please refer to response to comment XLVIII(b) pig mortality. Composting in an enclosed composting barn will greatly reduce flies and odors.

- d. Comment: What will happen to our land value with such a facility so close by?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

LXVII. Marian Kasowski

- a. Comment: Odor and health issues.

Department Response: Please refer to response to comments XVII(a) odor and XXXV(d) human health.

- b. Comment: Contamination of groundwater.

Department Response: Please refer to response to comment XIX(b) groundwater.

LXVIII. Mary Scherling, Cass County Commission Chairman

- a. Comment: I believe it important that the permit approval process be explained.

Department Response: Once the Department has acquired a complete application, a fact sheet and draft permit are developed. The fact sheet and draft permit are then public noticed for a minimum of 30 days. The Department will address any comments submitted during the public notice permit. The last step is to determine if a finalized permit can be issued or not. Please refer to the introductory remarks to the comments for a description of the permitting process.

LXIX. Michael Beaton

- a. Comment: Air quality will most certainly be affected.

Department Response: Please refer to response to comment XX(a) air quality.

- b. Comment: Will the bacteria and pathogens find their way into the water supply? Technology may not be capable of overcoming this possibility.

Department Response: Please refer to response to comments XVIII(d) air, water, quality of life, and XIX(b) groundwater.

- c. Comment: What will be the impact of such a large operation on small farms, working to raise and sell their animals?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

LXX. Michelle Gilley – Summary of comments.

- a. Comment: How much water will be used?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: Will the groundwater and air quality be monitored?

Department Response: The facility will be required to conduct weekly inspections of all stormwater diversion devices and runoff diversion structures and devices channeling runoff to the manure storage structure which is a requirement stated in the Approval to Operate permit as required by NDAC § 33-16-03.1. The Department also has the ability to take odor readings and water samples of monitoring wells during inspections of the facility.

- c. Comment: How often will the farm be inspected?

Department Response: Please refer to response to comment XVIII(b) inspections.

- d. Comment: Who will pay to clean up the mess if they decide to abandon the project?

Department Response: The Department's staff will utilize every aspect of enforcement possible to hold the company responsible for any expenses needed to maintain compliance. Please refer to response to comment C(g) facility closure.

- e. Comment: Does the state of ND plan to enforce the payment of fines if the pig farm exceeds certain limits?

Department Response: Please refer to response to comment XXXI(c) enforcement.

- f. Comment: Does the state of ND even have set air and water quality limits for this kind of operation?

Department Response: The Department has air (NDCC § 23-25, NDAC § 33-15-16) and water quality (NDAC § 33-16-02.1) standards which must be met to maintain environmental quality.

- g. Comment: Where will all that waste go?

Department Response: Please refer to response to comment VIII(b) manure application.

- h. Comment: Who is going to pay for the necessary road improvements?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- i. Comment: Is Pipestone Systems getting a tax break?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- j. Comment: Where is the Environmental Impact Statement?

Department Response: Neither state nor federal law required an environmental impact statement for this facility. A full environmental impact statement is only required for certain federal projects. But, as part of its review process, the Department developed a fact sheet for this facility.

LXXI. Pam Brekke

- a. Comment: There are rules set in place by the NDDH for a reason and that is to protect the producers and the public equally. If they see problems, they will have to be addressed before anyone can move ahead.

Department Response: Thank you for the comment.

LXXII. Ramona Fraase

- a. Comment: Cause odor and excess water runoff could potentially run

down the ditch right in front of my house.

Department Response: Please refer to response to comments XVIII(a) odor, XXXIII(b) the containment pond, and XXIV(c) runoff.

- b. Comment: The value of my home will certainly go lower.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

LXXIII. Randal Melvin

- a. Comment: My personal opinion is that any adverse environmental impact to our area is virtually nonexistent.

Department Response: Thank you for the comment.

LXXIV. Mrs. Ray Wiemest

- a. Comment: I'm concerned about the proximity to the city's only about 3 miles away.

Department Response: Please refer to response to comment I(b) setbacks.

- b. Comment: If contamination from manure pits or other run off gets into the groundwater, it would affect many. It happened at Carrington!

Department Response: In reviewing the current monitoring wells at an existing facility in the Carrington area, no data was found that would show an impact to the local groundwater. Furthermore, we have had no cases of manure pits or other runoff from permitted facilities affecting groundwater in the area.

- c. Comment: Air quality - both odor & diseases.

Department Response: Please refer to response to comments XX(a) air quality and XXXV(d) human health.

- d. Comment: House flies - bred in barn & compost.

Department Response: If there is a complaint or if, during an annual inspection, the Department finds evidence that the fly population is noticeably high, the Department will notify Rolling Green that it must take action in reducing the fly population in and around the hog barns. This would be established under Section 6 of the *North Dakota Livestock Program Design Manual*, as required under NDAC § 33-16-03.1-08 - Facility Requirements.

- e. Comment: Loss of property value.

Department Response: This is beyond the scope of the proposed permit and outside the Department's authority.

LXXV. Randy Coon

- a. Comment: As an agricultural economist who works on economic impact assessments, the claim that this project will have an economic impact on the community is questionable.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: The additional truck traffic on township roads will require upgrades and maintenance at a time when their budgets are already stressed.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- c. Comment: This facility would most likely result in tax increases for local residents.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- d. Comment: Hog manure to be used as fertilizer would bring dollars to the corporation, which also would leave the community as these sales would replace local retailer's volume of sales. My preliminary analysis is supported by other published studies (MacCammal 1988; Gomez and Zhang 2000; Durrenberger and Thu 1996; Abeles-Allison and Conner 1990; Foltz et al. 2002; Lawrence 1994).

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- e. Comment: Hog waste contains disease-carrying pathogens, such as Salmonella, E coli, and Cryptosporidim, and fecal coliform which can be 10 to 100 times more concentrated than human waste (National Resource Defense Council 2013). In addition, the EPA says that manure often contains hormones, pathogens, and toxic metals (Huber and Mills 2013). About 70% of the antibiotics used in the US are fed to animals that are not sick. Many in the scientific community have expressed concern that the system will increase antibiotic resistance and put human health at risk (Wallinga 2004).

Department Response: Please refer to response to comments XXXV(d) human health, VIII(b) manure application, and X(a) antibiotics.

- f. Comment: Air emissions from confined hog operations contain ammonia which reacts with other gases in the air to form fine particle pollution, a public health threat linked to decreased lung function, cardiovascular problems. Numerous other studies document the health risks associated with confined hog operations, with increased risks for those who work in these facilities. Beyond being unpleasant, these emissions adversely affect human lungs, brains, and other organs (Kilburn 2011).

Department Response: Please refer to response to comment XX(a) air quality.

- g. Comment: Contaminated surface and ground water would be a serious problem for people living in the area. Selected studies that document these types of accidents include Peach (2014), Huber and Mills (2013), and Natural Resource Defense Council (2013).

Department Response: Please refer to response to comments XXXIII(b) the containment pond and XIX(b) groundwater.

- h. Comment: An additional problem that the neighbors will have to deal with is flies as they are attracted to this type of facility. These insects could become extremely annoying and also a health hazard.

Department Response: Please refer to response to comment LXXIV(d) flies.

- i. Comment: Homeowner's property values will be negatively affected.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

LXXVI. Ron Fraase

- a. Comment: The applicant told me that if unfavorable weather conditions occur, they can dispose their waste on top of the ground even if it is frozen. This will cause odor problems and potential run off into ditches and normal drainways.

Department Response: Please refer to response to comments VIII(b) manure application, XXIV(c) runoff, and XXV(f) frozen ground.

- b. Comment: Another concern of our township is the extra traffic on some of our roads.

Department Response: Thank you for the comment. This is beyond the

scope of the proposed permit and outside the Department's authority.

LXXVII. Sandra Cromwell

- a. Comment: If the air becomes too polluted there will not be an option but to use oxygen at a great risk of the short time of life that I have left.

Department Response: Please refer to response to comments XX(a) air quality and XXXV(d) human health.

LXXVIII. Seth Webster

- a. Comment: We are concerned about the drainage that might affect water quality, the spread of disease, and the odor.

Department Response: The drainage around the facility is a clean-water drainage and will only handle snow, rain water, and ground water. All liquid manure will be contained in concrete pits under the barns and will not come into contact with the water sources listed previously. Please refer to response to comments XXIV(c) runoff, XVIII(b) flies and disease, and XVIII(a) odor.

- b. Comment: We are equally concerned about the value of the land as this pig operation emits toxics into the water drainage and land.

Department Response: Land value is beyond the scope of the proposed permit and outside the Department's authority. Please refer to response to comments VIII(b) manure application and XVII(d) air, water, and quality of life.

- c. Comment: Does this corporation have a plan for disposal of dead animals and the placentas? Would these be a source for flies and possible disease?

Department Response: Please refer to response to comments XLVIII(b) pig mortality and LXXIV(d) flies.

LXXIX. Shawn Frueh

- a. Comment: I am concerned that the air quality will be very harmful to my parents and grandmother. Both of them have compromised immune systems, and this could seriously affect their quality of life.

Department Response: Please refer to response to comments XX(a) air quality and XXXV(d) human health.

- b. Comment: My parent's legacy to us children is also being threatened with the prospect of losing minimal of 40% of their property value.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

LXXX. Tim Frueh

- a. Comment: I have deep concerns of the quality of air, water, and life if this CAFO is permitted in this area as well as the property values of homes and businesses if this permit is granted. Please review the following: [www.cdc/nceh/ehs/docs/understanding](http://www.cdc/nceh/ehs/docs/understanding)

Department Response: Property value is beyond the scope of the proposed permit and outside the Department's authority. Please refer to response to comment XVII(d) air, water, and quality of life.

LXXXI. Tracie Zaun

- a. Comment: When I heard about a hog farm coming to our community, I had immediate concerns for my health and others in the community that also suffer from autoimmune diseases and other health issues. One of my biggest concerns that I have is zoonotic disease transmission, especially MRSA.

Department Response: Please refer to response to comment XLI(b) MRSA.

LXXXII. Vincent Larson

- a. Comment: We do not wish to undermine legitimate farming enterprises, but do have a concern about the amount of smell that could be generated.

Department Response: Please refer to response to comment XVIII(a) odor.

LXXXIII. Darren Olafson

- a. Comment: As a farmer and business owner in ND, I strongly urge the DOH to approve the Rolling Green Family Farms new hog facility near Buffalo. It appears that they are following the rule of law and we need more operations in the state that are good stewards and can help us stay strong in the world of animal agriculture.

Department Response: Thank you for the comment.

LXXXIV. Glen Muske

- a. Comment: Yes ag is a big ND economic driver, but we need to move slowly down this slippery slope. We could have another oil situation on our

hands.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

LXXXV. John Jacobson

- a. Comment: These farms must go through the process and meet the requirements of the DoH and should not be stopped because of rhetoric and fear.

Department Response: Thank you for the comment.

LXXXVI. Nathan Fegley

- a. Comment: I support the proposed hog farm in Buffalo because I know that with proper oversight of construction and management that there are very little environmental impacts.

Department Response: Thank you for the comment.

LXXXVII. Sandy Azure

- a. Comment: The state of ND is currently not taking into consideration title VI in allowing large scale hog farms. The state regulations are too weak and oversight is severally under-served to address the adverse impacts of industrial swine production. The EPA and the state must take seriously the potential for discrimination.

Department Response: The Department seeks to prevent and eliminate discrimination against individuals in the delivery of programs administered by the Department. By following the department non-discrimination policy in implementing the rules and regulations that govern the oversight of animal feeding operations, the Department addresses the issues of discrimination under Title VI.

LXXXVIII. Rachel Bina

- a. Comment: I understand the public concern, but if implemented correctly, can be a success story for ND agriculture. I am a grain farmer, very concerned about growing domestic uses of the feed grain crops grown in ND. If we can feed our grain crops to our animals locally, it is a win-win for our local economy.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

LXXXIX. Gregory Mostad

- a. Comment: I'm in favor of the proposed pig farm near Buffalo that was in the news this week. If the family has met all the requirements of the Health Department, they should be able to grow their business.

Department Response: Thank you for the comment.

XC. Debora Miller

- a. Comment: My questions are will this affect the resale value of my home?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: Will the water table be affected?

Department Response: Please refer to response to comment XIX(b) groundwater.

- c. Comment: Where will all the waste be dumped?

Department Response: Please refer to response to comment VIII(b) manure application.

- d. Comment: Can I count on smelling the hog farm throughout the year?

Department Response: Please refer to response to comments VIII(b) manure application, XVIII(a) odor, and XXXIV(n) CAFO Program.

- e. Comment: If the plan is to use the waste as fertilizer is any of the farmland it will be used on near a river where possible pollution can occur?

Department Response: All fields near streams, rivers, and other water bodies will require 100-foot setbacks to prevent runoff from contaminating these water bodies. Liquid manure will also be injected or incorporated into the field to prevent runoff. This is established in Section 7 of the *North Dakota Livestock Program Design Manual*, which is required by NDAC § 33-16-03.1-08(3).

XCI. Alan Webster

- a. Comment: We question why a local farmer would sell his land to a large corporation and the news didn't become public until now.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: We are concerned because there is a drainage system that flowed from the land north of I94 to our land directly south of I94. We are concerned about the drainage that might affect water quality, the spread of disease, and odor.

Department Response: Please refer to response to comments XXXIII(b) the containment pond, LXXIV(d) flies, L(a) waterway, and XVIII(a) odor.

- c. Comment: We are equally concerned about the value of the land.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- d. Comment: Does this operation have a plan for disposal of dead animals and the placentas? Would these be a source for flies and possible disease?

Department Response: Please refer to response to comments XLVIII(b) mortality and LXXIV(d) flies.

XCII. Antoinette Babcock

- a. Comment: Specifically, we are concerned about the quality of life due to the odor, the environmental impact on the water and devaluation of property values.

Department Response: Please refer to response to comments XVII(d) air, water, and quality of life and XIX(b) groundwater. Property values are beyond the scope of the proposed permit and outside the Department's authority.

XCIII. Ron Punton

- a. Comment: I am concerned over the amount of traffic this operation will bring to our road.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: I do worry about air quality due to this operation.

Department Response: Please refer to response to comment XX(a) air quality.

- c. Comment: I believe that confinement of any animal is inhumane.

Department Response: Thank you for the comment. This is beyond the

scope of the proposed permit and outside the Department's authority.

- d. Comment: I am very concerned with the lagoons/manure being stored underground, who will monitor this? Will the groundwater be contaminated, what about runoff?

Department Response: Please refer to response to comments XXXIII(b) the containment pond, XXIV(c) runoff, XXV(f) frozen ground, L(a) waterway and XXXIV(n) CAFO Program.

XCIV. Susan Sproul

- a. Comment: Specifically, we are concerned about the quality of life due to the odor, the environmental impact on the water and the devaluation of property values.

Department Response: Property values are beyond the scope of the proposed permit and outside the Department's authority. Please refer to response to comments XVIII(a) odor, XIX(b) groundwater, and XVII(d) air, water, and quality of life.

XCV. Pat Faul

- a. Comment: I am in favor of the pig farm, any advancement in animal agriculture benefits farmers statewide.

Department Response: Thank you for the comment.

XCVI. Ashley Moyer

- a. Comment: These types of operations will produce a lot of manure which contain many pathogens that can cause cancer and many other health concerns.

Department Response: Please refer to response to comment XXXV(d) human health.

- b. Comment: My cousin and his wife just built a brand new house 1.5 miles away from this proposed operation. They will be able to see it from their backyard, and the smell will most certainly affect them (and everyone else who lives nearby).

Department Response: Please refer to response to comments XVIII(a) odor and I(b) setbacks.

- c. Comment: Fecal wastes from these animals will be applied to the soil surface and to varying extents are then incorporated into the soil. These fecal wastes can also enter our water systems by direct contamination of

the water or through seepage or surface runoff.

Department Response: Please refer to response to comments XXIV(c) runoff, XXV(f) frozen ground, L(a) waterway, and VIII(b) manure application.

- d. Comment: As someone who will inherit the land .5 miles away from this proposed operation, the value of this land will be greatly affected. Studies have found that the average loss of land value within three miles of a CAFO was \$112/acre. My families land and home value will all plummet if this operation is built.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

XCVII. Marlene Hermanson

- a. Comment: We have a dairy farm just outside of town (Casselton). It gets some strong odors if the wind is at the right direction. But I live with it, I've been here for 23 years. If you are having a vote on it I'll vote for it (Rolling Green Family Farms, LLP).

Department Response: Thank you for the comment.

XCVIII. Barbara Carlisle

- a. Comment: NDDH, I implore you to deny any more factory farms. I've been pondering moving to ND but if this state values money over public health, I'll move elsewhere.

Department Response: Thank you for the comment.

XCIX. Linda Wendel

- a. Comment: Pipestone Systems came in and promised them the same thing that they are promising us, but they lied. She said that they have seen no economic impact from this farm coming to their town, only problems.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: At the SD hog farm they have already have had one family move out of the area and they had to sell their property for quite a bit less than what it had been worth. She said another one will be moving soon if they are not able to get the company to decrease the hog smell. She said that these people are about a mile away.

Department Response: Please refer to response to comments XVIII(a) odor and XVII(d) air, water, and quality of life. South Dakota does not have odor rules.

- c. Comment: I am now concerned about my health since I have asthma. I know that one of my neighbors is contracted to spread manure and I don't know how much this will impact my health. One report that I read said that the air quality can affect you up to 5 miles away. (See attached information) I believe that I live about 2 ½ miles away as the crow flies from the hog farm.

Department Response: Please refer to response to comment XX(a) air quality.

- d. Comment: The township will not see additional money since the wear and tear on the roads will actually cost them more to upkeep. The state will see more wear and tear on the interstate which will in turn cost all of ND tax payers.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- e. Comment: So where is the benefit? Who is getting the money other than the land owner who is selling the land and Pipestone?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- f. Comment: Which state officials or politicians are getting special favors?

Department Response: The North Dakota Department of Health is charged with implementing the rules and regulations passed by the legislative body of the State. These rules do not take into consideration personal opinions and special favors, but they do use sound science in conjunction with the rules to help protect the environment and the citizens of North Dakota. In addition, the Department has adopted a conflict of interest policy that imposes even more restrictive requirements than those found in the NDCC. The *North Dakota Department of Health Personnel Policy Manual*, "Ethics Policy," (pages 18-20) (May 2015) requires employees to avoid conflicts of interest or even the appearance of a conflict of interest. *Id.* at 18.

- g. Comment: Why is the health of our people not the number one priority?

Department Response: Please refer to response to comments XXXV(d) human health and VII(a) laws and rules.

- h. Comment: Why does it have to be this land, why not build where we are not going to hurt anyone's health? Maybe the workers need to be required to wear respiratory gear so they do not have long term health problems.

Department Response: Please refer to response to comments XXXV(d) human health and I(b) setbacks, and contact OSHA in regard to worker safety.

- i. Comment: If this is such a great thing for us, why was this hidden from the public for over a year? The only way Buffalo residents found out about it was because the NDDH had to print a notice in the Fargo Forum by law.

Department Response: Please refer to response to comment XVII(a) public notice.

- j. Comment: When we heard about it we were told by the NDDH that we had to write letters in a very short amount of time and get them to the NDDH and our reason for not wanting the hog farm could not be because of odor.

Department Response: Please refer to response to comment XVIII(a) public notice. The Department reviews and responds to all comments received.

- k. Comment: I told Jeremy at the NDDH that I have asthma and asked him if he understood that it was odors that activated asthma symptoms like mine. I told him that the reason that there is an odor is that there is something in the air. So if something is in the air that is harmful to us, why is that not a reason for us not to want the facility located here?

Department Response: Please refer to response to comments XX(a) air quality and XXXV(d) human health.

- l. Comment: What happens if they get a disease in the building that they can't get rid of? It will then become the township, county and states problem. They will file for bankruptcy and they will walk away.

Department Response: It would be the responsibility of the state vet and the U.S. Department of Agriculture (USDA) to assist the Rolling Green facility if an outbreak occurs. The CAFO Program would be secondary for assistance if called upon. Please refer to response to comment C(g) closing facility.

- m. Comment: The NDDH needs to remember that the health of the ND people are the first priority, not whether a company meets requirements or not. If other states are not allowing these people in, they are doing it for a reason. They have learned that these types of facilities are not good for

the people or the land. (READ Linda's attached information for more comments)

Department Response: Please refer to response to comments XXXV(d) human health and VII(a) laws and rules.

C. Gwen Fraase

- a. Comment: Rolling Green Family Farms LLP stated that when they are unable to inject the manure into the ground, they will place it on top of the ground and that the state would permit that.

Department Response: The Department has included a permit condition to require that, when applying liquid manure to fields, it must be injected or incorporated within 8 hours in order to reduce odor and the risk of runoff. Department findings more clearly defined land application by spelling out incorporation within 8 hours. For more information, please refer to response to comment VIII(b) manure application.

- b. Comment: I have numerous concerns regarding spring runoff and their overflow and composting management. Will these barns be kept up to code or grandfathered in?

Department Response: In regard to spring runoff and Rolling Green's manure storage, please refer to response to comments XXIV(c) runoff, XXV(f) frozen ground, XXXIII(b) the containment pond, and L(a) waterway. In addition, refer to response to comment XLVIII(b) pig mortality. If the applicable laws and rules within the Department's authority are revised, the Department will require Rolling Green to update the facility in accordance with any such laws and rules in order to maintain its Approval to Operate permit.

- c. Comment: Homes around confinement barns will be devalued.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- d. Comment: Why does big business from out of state trump the rights of local tax payers and residents?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- e. Comment: How do you expect a township to maintain a road that is highly trafficked without affecting service to our present residents?

Department Response: Thank you for the comment. This is beyond the

scope of the proposed permit and outside the Department's authority.

- f. Comment: This is an out of state LLP. Plain and simple, the majority of the money will be leaving our state.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- g. Comment: What occurs when the barns close down for whatever reason?

Department Response: In the past, livestock operations that have quit or filed for bankruptcy have disposed of their livestock manure in accordance with their NMPs before closing the facilities. Lenders of the facilities have also assisted in the closing of the facilities. To date, we have had no problems getting the former owners to remove livestock waste from their facilities. No county or township has had to assume liability for such a facility. The Department can use NDAC § 33-16-03.1-10 - Enforcement, to ensure all manure is handled according to the NMP.

- h. Comment: Rolling Green Family Farms, LLP stated that ND "invited" them. I just drove to Bismarck the other day and noticed several areas of wide open spaces. Why would ND pick the fastest growing county affecting 9 rural homes and a local town?

Department Response: The Department does not make determinations as to where livestock facilities should be built in the state, except regarding compliance with setback distances. Siting a facility is beyond the scope of the proposed permit and outside the Department's authority.

CI. Gerald Larson

- a. Comment: My daughter and her family live just south of I94 by Buffalo ND. They told me that the proposed hog farm will be 1 ½ miles from their place. This is not a good area. There are a lot of open spaces in ND, this is not a good area.

Department Response: Siting a facility is beyond the scope of the proposed permit and outside the Department's authority. Please refer to response to comment I(b) setbacks.

CII. Gail Pederson

- a. Comment: We have historically turned down the corporate farming proposals and will be voting on it again this summer. Repetitively we have stated we do not want large corporate farms.

Department Response: Policy decisions relating to corporate farming in the state are beyond the scope of the proposed permit and outside the

Department's authority.

- b. Comment: The environmental impact and the health and wellbeing of ND will be forever compromised if approved. It is the states judiciary responsibility to protect its citizens. If this proposal is approved by the state of ND it is reflective of reckless endangerment and neglect to its residents by compromising water and air quality, health and wellbeing.

Department Response: Please refer to response to comments XX(a) air quality, XIX(b) groundwater, and XXXV(d) human health.

- c. Comment: The owners of this proposal live out of state. So money made is not an economic gain to ND.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- d. Comment: Homeowners nearby the site will lose property value.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

### CIII. Weston Dvorak

- a. Comment: The livestock industry is vitally important to the economy of ND. It's good for local grain farmers and if done correctly, is good for the environment. I unconditionally support this hog farm in their application to the ND Dept. of Health for their permit.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

### CIV. Doug Goehring

- a. Comment: The advanced technologies available to modern agricultural producers, combined with the strictest of environmental regulations required at both the state and federal level makes concentrated animal feeding operations safe. Expanding any form of livestock production in the state will add value to our crops and our rural economies as well.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

### CV. Todd Leake

- a. Comment: Howes Township is responsible for siting any facility such as the proposed Rolling Green facility, and its zoning resolution, district map, ordinances and comprehensive plan are filed and were available with the

Howes Township Clerk. Rolling Green has never made an application for a conditional use permit or a certificate of zoning compliance with Howes Township. Howes Township therefore has never sited any facility at SE ¼ Section 4 Township 139 N Range 54W.

Department Response: The Department understands that there is a possible dispute regarding the applicability and validity of the Howes Township zoning ordinance submitted to the Department on February 26, 2016, with an amendment submitted on March 23, 2016. See NDCC § 58-03-17 (a township must file “[a]ny zoning regulation that pertains to a concentrated animal feeding operation” with the Department for that regulation to be effective).

The Department does not determine the applicability or validity of zoning ordinances. If there is a concern that Rolling Green is executing the Approval to Operate in violation of local zoning, the appropriate party can commence an action to enforce local zoning. The Approval to Operate does not remove the permittee’s responsibility to comply with other local, state, and federal requirements.

- b. Comment: It is the responsibility of a person desiring to construct a facility in Howes Township to contact the township to comply with local zoning, as Howes Township is the local subdivision of the state and the local government. This is especially true in the light that Rolling Green has professional legal counsel that should be aware of the requirements of local governments, including North Dakota townships. Rolling Green Family Farms should also have been aware due to the fact that the person that they are acquiring the property from to build the proposed facility in Section 4 of Howes Township, Mr. Randy Melvin, was a Howes Township Supervisor and should know or should have known of the zoning requirements of the township that he sat as both a Zoning Commissioner, and as a Township Supervisor.

Department Response: Please refer to response to comment CV(a) zoning.

- c. Comment: Because the local zoning authority, Howes Township, has not sited any facility in Howes Township at Sec. 4, I believe that the North Dakota Department of Health has received an erroneous and incomplete Application for Approval for Livestock Waste System from Rolling Green Family Farms RE, LLP, and that the ND Department of Health should reject the application as incomplete and suspend or terminate the application process until such time as Rolling Green can make a new application, complete with the required applicable zoning requirements.

Department Response: Please refer to response to comment CV(a) zoning.

CVI. Glen Philbrick

- a. Comment: There is nothing in the plan to deal with odor.

Department Response: Please refer to response to comment XVIII(a) odor.

- b. Comment: The plan includes somewhat of a paper trail if the manure changes hands but who is really monitoring this? Too much manure in any one location will result in a negative impact. Are there any assurances too much manure will not be dumped in any one location including locations above aquifers?

Department Response: Please refer to response to comment VIII(b) manure application. In addition, refer to response to comment XXXIV(n) CAFO Program. The Department's review has determined most of the fields submitted for application in the NMP are not located over delineated glacial drift aquifers, according to the North Dakota State Water Commission groundwater aquifer map for Cass County. The map does show there are two fields indicated in the NMP where the southern delineated edge of the Page Aquifer cross the northern edge of the fields. The Page aquifer is an artesian system confined at the top by deposits of glacial till.

CVII. Craig Wendt

- a. Comment: More recent studies reported environment impacts. Because large animal confinement operations house densely concentrated livestock, they are prone to a host of negative environmental impacts on water, air, and human health.

Department Response: Please refer to response to comments XXIV(c) runoff, XXV(f) frozen ground, L(a) waterway X(a) antibiotics, XVIII(a) odor, XX(a) air quality, and XXXIII(a) hydrogen sulfide and ammonia.

- b. Comment: Think about this: If the fans in this facility shut down, everything dies. But yet it's ok for these toxic gases to be released into our air? Tell me how you can guarantee that this pollution has no affect on people living in the area.

Department Response: Please refer to response to comments XX(a) air quality and XXXV(d) human health.

CVIII. Alan Dostert

- a. Comment: The Permit Application lacks calculations and disclosure of expected mortality rates of all groups of the hog population planned to be

present at the facility. These expected rates, along with the proposed procedures for composting, calculations of total volume of carcass/carrion/animal material to be composted, and the actual verification of necessary compost bin area and volume necessary to safely and effectively compost carrion.

Department Response: Please refer to response to comment XLVIII(b) pig mortality. Additional information regarding compost area sizing has been submitted.

CIX. Liane Stout

- a. Comment: We demand that the nutrient application setbacks match those that have been submitted and filed at the North Dakota Department of Health by Howes Township on February 26, 2016.

Department Response: Please refer to response to comment CV(a) zoning.

CX. Kent Beilke

- a. Comment: The Health Dept. has all the records of what was presented at the meeting and I would ask you what health concerns from the ND citizens were dispelled by the proponents of this facility? They know they cannot prove that there are no health and environmental problems that arise from every single large scale CAFO.

Department Response: Please refer to response to comments VII(a) laws and rules and XXXV(d) human health.

- b. Comment: My last concern is who will be held responsible for the adverse health and economic issues that will arise from this facility? Can a ND resident file suit against the state of ND, the Health Department or even the corporation bringing this to our state?

Department Response: The Department will take appropriate enforcement action against Rolling Green for violations of laws and rules within the scope of its authority. Economic issues are beyond the scope of the proposed permit and outside the Department's authority. The Department cannot give legal advice. If a resident wants information on filing a lawsuit, they should consult with an attorney.

CXI. Michelle Weigelt

- a. Comment: My question to you is, in recent years a commercial pig farm permit was declined by Carrington, ND. This area is much more remote than the proposed area in Buffalo, so why will one be granted in a much

more populated area?

Department Response: The Department has no record of an application for permit from any hog operation near Carrington.

CXII. Gwen Fraase

- a. Comment: Please pay close attention to the type of soil that the manure is to be applied to and the amount of land available. I hope the soil expert's information and testimony will be beneficial in your decision.

Department Response: Please refer to response to comments CXXX(b)&(c) Soils, and VIII(b) manure application.

- b. Comment: Please pay close attention to land elevations, water table, wells and how the water flows in our area. If this site is approved, there is a realistic fear of our environment, air water, land and personal health being compromised.

Department Response: Please refer to response to comments XXIV(c) runoff, XXV(f) frozen ground, L(a) waterway, XIX(b) groundwater, X(a) antibiotics, XVIII(a) odor, XX(a) air quality, and XXXIII(a) hydrogen sulfide and ammonia.

- c. Comment: Please pay close attention to the numerous individuals in close proximity who have realistic concerns regarding their health and well being. If their physicians express concern should not you?

Department Response: Please refer to response to comment XXXV(d) human health.

CXIII. Ryan Schultz

- a. Comment: As a cattle producer and farmer with my major commodity being row crops, I see a need of more livestock operations in the area to use our corn and soybeans as feed. I realize there may be issues but this will be a state of art operation with a major emphasis on biosecurity, using the latest technology so the whole "stink" factor is not a valid point against it.

Department Response: Please refer to response to comment XVIII(a) odor.

CXIV. Vicki Wendt

- a. Comment: My concern is that the "code" is not strong enough to protect our community from the risks of living alongside a CAFO. It appears that the State of ND has limited experience with such operations.

Department Response: The state has ten (10) other large swine CAFOs that are inspected yearly, and inspection reports indicate operations are satisfactory. There have been operations similar in scope to the proposed facility permitted in the state since 1997. North Dakota's requirements are similar to the requirements in neighboring states.

- b. Comment: The CAFO role in contributing to such increased antibiotic resistance is very reasonably questionable. Proponents want to call our fears unfounded when there is plenty of evidence that the risks to human health are very real. It would be irresponsible for the Department of Health to approve this permit, regardless of current code, when there is so much evidence of risk.

Department Response: Please refer to response to comment X(a) antibiotics.

- c. Comment: I expect the Department of Health to determine that odor nuisance level before subjecting our community to it.

Department Response: Please refer to response to comments XVIII(a) odor and XX(a) air quality.

- d. Comment: What is the State's Plan in regard to developing livestock production in ND? And at who's expense?

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

CXV. Brenda Jorgenson

- a. Comment: There is no need to contaminate any more land that could otherwise be useful for food production. There are other means to produce food than in a CAFO.

Department Response: Please refer to response to comments VIII(b) manure application and VII(a) laws and rules.

CXVI. Craig Scott

- a. Comment: Ground water and surface water pollution and associated health impacts.

Department Response: Please refer to response to comments XIX(b) groundwater and XXXV(d) human health.

- b. Comment: Air pollution, odors, and associated health and social impacts.

Department Response: Please refer to response to comments XX(a) air quality, XVIII(a) odor, and XXXV(d) human health.

- c. Comment: Believe me confined animals had a part to play in this issue as the manure that is produced is injected into the soil and thus increased the nitrate runoff into the water ways of the state.

Department Response: Please refer to response to comment VIII(b) manure application.

CXVII. Todd Sears

- a. Comment: We must use science and common sense to make any regulations, not fear and mass hysteria. The legal use of property and ability to have large scale animal agriculture is critical to the future of North Dakota.

Department Response: Thank you for the comment.

CXVIII. Brian Steckler

- a. Comment: I am not against it but do believe there needs to be more consideration into the build plans and manure spreading operations of this facility.

Department Response: Please refer to response to comment VIII(b) manure application and CXXIX(dd) design.

- b. Comment: I have worked for 15 years in commercial construction and Mr. Doserts testimony is completely accurate. You do not and cannot pour concrete in the Red River Valley without control joints no matter the length let alone 700 feet.

Department Response: Please refer to response to comment CXXIX(dd) design.

CXIX. Terry Schaunaman

- a. Comment: Studies assessing consequences of CAFOs on the social fabric of communities find detrimental impacts-overall decrease in quality of life in their communities.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: Residents near CAFOs report decreased property values.

Department Response: Thank you for the comment. This is beyond the

scope of the proposed permit and outside the Department's authority.

- c. Comment: Negative impacts of large, industrial agricultural operations on traditional diversified farming communities.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- d. Comment: Residents of hog CAFO communities reported greater respiratory problems and eye irritations.

Department Response: Please refer to response to comments XXXV(d) human health and XX(a) air quality.

- e. Comment: Growing concerns about the higher risks of E-coli O157:H7 and antibiotic resistant bacteria, including MRSA.

Department Response: Please refer to response to comments XLI(b) MRSA and XXXV(d) human health.

- f. Comment: Residents living near CAFOs report being more depressed due to psychological and physical effects of odors.

Department Response: Please refer to response to comments XXXV(d) human health and XVIII(a) odor.

- g. Comment: Inevitable odors caused by huge quantities of livestock manure generated and number of animals.

Department Response: Please refer to response to comment XVIII(a) odor.

- h. Comment: Pollution of streams, aquifers, and watersheds with huge quantities of animal and antibiotic wastes.

Department Response: Please refer to response to comments XXIV(c) runoff, XXV(f) frozen ground, and L(a) waterway.

- i. Comment: Studies on large animal confinement operations report environment problems affecting air and water quality and human health.

Department Response: Please refer to response to comments XX(a) air quality, XIX(b) groundwater, XXXV(d) human health, and XVII(d) air, water, and quality of Life.

- j. Comment: Create greater inequity in income distribution-new jobs are lower-paying than existing jobs.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

CXX. Gretchen Deeg

- a. Comment: The proposed hog factory is too close to the town of Buffalo. No one should be asked to sacrifice their health and quality of life for an operation that will primarily benefit people outside of the community.

Department Response: Please refer to response to comments I(b) setbacks, XVII(d) air, water, and quality of life, and XXXV(d) human health.

CXXI. Jean McManigle

- a. Comment: Groundwater and surface water pollution and associated health impacts.

Department Response: Please refer to response to comments XXIV(c) runoff, XXV(f) frozen ground, L(a) waterway, XIX(b) groundwater, and XXXV(d) human health.

- b. Comment: Air pollution, odors, and associated health and social impacts.

Department Response: Please refer to response to comments XX(a) air quality, XVIII(a) odor, and XXXV(d) human health. Social impacts are beyond the scope of the proposed permit and outside the Department's authority.

- c. Comment: Antibiotic resistance and the spread of infectious diseases to communities.

Department Response: Please refer to response to comment X(a) antibiotics.

CXXII. Johns Hopkins

- a. Comment: Based on evidence from numerous scientific studies of similar facilities, the proposed operation, if constructed and put into operation, may present a range of health risks to members of the surrounding community.

Department Response: Please refer to response to comment XXXV(d) human health.

- b. Comment: Antibiotic resistance and the spread of infectious diseases to communities.

Department Response: Please refer to response to comment X(a) antibiotics.

- c. Comment: Groundwater and surface water pollution, and associated health impacts.

Department Response: Please refer to response to comments XIX(b) groundwater, XXIV(c) runoff, XXV(f) frozen ground, L(a) waterway, and XXXV(d) human health.

- d. Comment: Air pollution, odor, and associated health and social impacts.

Department Response: Please refer to response to comments XX(a) air quality, XVIII(a) odor, and XXXV(d) human health. Social impacts are beyond the scope of the proposed permit and outside the Department's authority.

- e. Comment: Studies suggest, for example, that antibiotic-resistant pathogens may be transmitted by workers into their homes and communities, conveyed by runoff into ground and surface waters, blown out of barns by ventilation systems, and spread to consumers via contaminated meat.

Department Response: Please refer to response to comments X(a) antibiotics and XXXV(d) human health. The other concerns raised in this comment are beyond the scope of the proposed permit and outside the Department's authority.

- f. Comment: Further evidence for disease transmission risks was documented in a 2013 study nearly 450,000 Pennsylvania residents, in which living near larger swine operations or cropland where swine manure is spread was significantly associated with elevated rates of infection with MRSA and skin and soft tissue infections.

Department Response: In regard to MRSA being spread by manure on cropland, manure will be injected or incorporated into soil within 8 hours. Please refer to response to comment VIII(b) manure application. This will greatly reduce the spread of diseases. In regard to the transmission of MRSA, please refer to response to comments XLVII(a) MRSA and XXXV(b) human health.

- g. Comment: Confining large numbers of animals indoors presents the challenge of how to collect, store, and dispose of the massive quantities of manure they generate. When such quantities are applied to nearby fields (the usual disposal), the amounts often exceed what surrounding land can absorb. When manure is over-applied, the excess-along with chemical and bacterial contaminants-is transported by runoff into surface waters

and may leach into groundwater.

Department Response: Please refer to response to comments VIII(b) manure application and XXIV(c) runoff.

- h. Comment: Animal confinement operations have been linked to a range of airborne pollutants, including ammonia, hydrogen sulfide, and other gases emitted from animal waste; and airborne particulates, which may be comprised of dried feces, animal dander, fungal spores, and bacterial toxins.

Department Response: Please refer to response to comments XX(a) air quality, XVIII(a) odor, and XXXIII(a) hydrogen sulfide and ammonia.

- i. Comment: Residents in Buffalo, ND and surrounding areas have relayed concerns to us regarding community members' various chronic health conditions, including asthma, chronic obstructive pulmonary disease (COPD), high blood pressure, cancer, and other ailments. There is evidence that some of these conditions-primarily asthma-may be exacerbated by living near industrial food animal production facilities, which raise concerns about whether these residents could be particularly vulnerable to the health risks described above.

Department Response: Please refer to response to comment XXXV(d) human health.

CXXIII. Liane Stout

- a. Comment: Please read articles and review: Drought Management Planning Important for Communities, Rural Water Systems, and Our Water, Keeping it Clean, from the NDDoH, Environmental Health Section, on basin water.

Department Response: Thank you for the submission of these articles. Some of these articles are beyond the scope of the proposed permit and outside the Department's authority. Please refer to response to comment VII(a) laws and rules.

CXXIV. MSK

- a. Comment: We feel the proper guidance, regulations and oversight put into place, this operation could be a success and welcome addition to our small town. We understand this will be a state of the art facility and all considerations will and have been made to ensure the safety and integrity of our local environment.

Department Response: Thank you for the comment.

CXXV. Ewelyn Tweed

- a. Comment: It will be too close to town of Buffalo, ND and 9 homes with families.

Department Response: Please refer to response to comment I(b) setbacks.

CXXVI. Myrna Hanson

- a. Comment: In my opinion, the health of local residents, environmental impacts, quality of life, and the impact on property values of surrounding farms, homes, and communities should be central to any decisions.

Department Response: Please refer to response to comments VII(a) laws and rules and XXXV(d) human health. Property values are beyond the scope of the proposed permit and outside the Department's authority.

CXXVII. Alecia Wisnewski

- a. Comment: University of Missouri Agricultural Economist John Ikerd did an excellent job summarizing the risks to communities with large CAFO's. In it he evaluated the commercial benefits of CAFO's, citing a financial benefit of only \$2/cwt of live hog-passing on a consumer savings of less than two cents per dollar for what we spend at the store. Is this saving worth the risk of infections that we cannot treat?

Department Response: This is beyond the scope of the proposed permit and outside the Department's authority.

- b. Comment: University of Illinois in 2009 completed evaluation of antibiotic resistance and residues in water and soil in close proximity to swine production facilities. Found tetracycline-resistant germs underlying 2 CAFO's and found in soils where manure is added.

Department Response: Please refer response to comment X(a) antibiotics. The Department understands that tetracycline is a broad spectrum antibiotic. Tetracycline is used to treat bacterial infections. One of the most common uses of tetracycline is in the treatment of acne. Tetracycline does occur naturally in bacteria as well. Please refer to Appendix C in response to tetracycline. In regard to the facilities that were studied, unlined earthen manure storage ponds were used. This, this type of construction does not meet current regulations in North Dakota. Refer to Section 5 of the *North Dakota Livestock Program Design Manual* as required by NDAC § 33-16-03.1-08.

- c. Comment: AMA and Administrative Academy of Pediatrics, among other

medical and health bodies, have issued a stance against CAFO's b/t the impact on antibiotic resistance and risk to population.

Department Response: Please refer to response to comments X(a) antibiotics and XXXV(d) human health.

- d. Comment: Say that they make good neighbors, if that is true, why are there continuing complaints, why are there continuing studies.

Department Response: Please refer to response to comment XXXIV(b) compliance history. Continuing studies are beyond the scope of the proposed permit and outside the Department's authority.

CXXVIII. Baumstark & Braaten

- a. Comment: Rolling Green must obtain an NPDES permit, not an Animal Feeding Operation Permit, and construction of the facility without an NPDES permit is illegal. Construction without a NPDES permit would also place Rolling Green at risk of citizen suit under North Dakota's implementation of the Clean Water Act.

Department Response: In 2003 and 2008, EPA adopted rules requiring certain non-discharging facilities to apply for National Pollutant Discharge Elimination System (NPDES) permit coverage, but these requirements were held invalid by *Waterkeeper Alliance v. EPA*, and *National Pork Producers Council v. EPA*. Current EPA rules require only discharging facilities to obtain an NPDES permit - 40 CFR § 122.23(d). The Department implements the NPDES program in accordance with current EPA rules. Accordingly, the proper permit for this facility is not an NPDES permit but instead an animal feeding operation Approval to Operate permit under NDAC § 33-16-03.1.

The Department is in the process of reviewing its rules to determine if any need updating. But even if the Department's rules could be read as requiring a rule that would require a non-discharging facility to apply for an NPDES permit, such requirement would not be grounds for denying this permit or issuing any type of enforcement action against the facility. See NDCC § 23-01-04.1.

- b. Comment: The project will cause unlawful groundwater pollution due to critical flaws in the facility's design.

Department Response: Please refer to the updated fact sheet and response to comments CXXXIX(dd) design and XIX(b) groundwater.

- c. Comment: The permit does not account for several wells within a mile of

the confinement facility that almost certainly exist at abandoned farmsteads, each of which could serve as a conduit for pollution from the facility to enter into groundwater.

Department Response: Please refer to response to comment LXIV(k) wells.

- d. Comment: The project will cause unlawful surface water pollution due to significant over-application of manure at non-agronomic rates.

Department Response: Please refer to response to comment VIII(b) manure application and the updated fact sheet section “Land Application of Manure.” Department calculations indicate the availability of 5,725.52 acres is sufficient to handle the volume of manure Rolling Green will generate in a year’s time.

- e. Comment: The project will cause pollution of the Maple River and adjacent wetlands due to over application of manure near drain tile that drains directly into this water body.

Department Response: In regard to nutrient over-application, please refer to response to comment VIII(b) manure application. Please refer to response to comment CXXIX(i) drain tile.

- f. Comment: The project will cause pollution of an intermittent stream and adjacent wetlands, none of which were accounted for in Rolling Green’s permit application.

Department Response: Please refer to response to comment VIII(b) manure application. Setback distances on the manure application site maps have been re-evaluated and some sites updated to provide the appropriate setback distance from wetlands and waterways.

- g. Comment: The project, as planned, poses very serious medical risks to the community, as described by the community’s doctors and experts at Johns Hopkins University.

Department Response: Please refer to response to comment XXXV(d) human health.

CXXIX. Concerned Citizens of Buffalo

- a. Comment: Land easement application forms are incomplete.

Department Response: The Department does not require the easement applicants to enter their crop rotation on the easement application form. Crops grown are included in the NMP.

- b. Comment: Legal descriptions and acreage errors on the Water Quality Risk Assessment Maps.

Department Response: There were some mislabeled maps in regard to township, section, range, and field numbers. These items have been corrected. The field maps also show total acres and spreadable acres. Rolling Green has more than the minimum acres needed for the proposed facility. Please refer to response to comment LXIV(g) spreadable acres.

- c. Comment: Crop rotations were not listed, making it difficult to determine nutrient needs.

Department Response: Crop rotation is listed in the NMP given to the Department by DeHaan and Grabs. The crops listed in this rotation are corn, soybeans, and edible beans.

- d. Comment: Soil test levels of phosphorus should be used to determine manure application rates.

Department Response: Soil test levels of phosphorus were used to determine manure application by the Department. Since the phosphorus index for the fields in the NMP show low to medium rating, the facility may apply based on a nitrogen basis, according to [guidelines].

- e. Comment: Available acreages appear to be overstated -- township setbacks are not on maps and land for the facility are included as eligible acres.

Department Response: Errors in acres at the facility site were noted and corrected by DeHaan and Grabs, so Rolling Green meets the Department's requirements of Section 7 of the *North Dakota Livestock Program Design Manual* and NDAC § 33-16-03.1-08(3). Please refer to response to comment LXIV(g) spreadable acres. In addition, please refer to response to comment CV(a) zoning.

- f. Comment: NRCS waste management soil ratings were not addressed.

Department Response: Waste management soil ratings were addressed through the use of an NMP. Please refer to response to comments VIII(b) manure application and CXXX(b) and (c) soils.

- g. Comment: Pollution from the manure application will ultimately end up in the Maple River which feeds into the Red River.

Department Response: Please refer to response to comments XXIV(c) runoff, XXV(f) frozen ground, and L(a) waterway.

- h. Comment: Hamerly-Tonka soils are rated “very limited” for application of manure and food processing wastes -- they account for 1,408.6 acres of the total listed for manure application.

Department Response: Please refer to response to comments VIII(b) manure application and CXXX(b) and (c) soils.

- i. Comment: Application of liquid manure on tiled land -- what is the policy in other states?

Department Response: Currently, there is no policy in regard to the land application of manure on drain tiled fields within the Department of Health. The Department will evaluate these drain tile sites on a case-by-case basis and not rely on policies from other states as they may not fully address all sites. For fields that have a drain tile system, manure application will need to be monitored by the facility and Department staff to determine if a preferential connection has been established. Water samples also will be analyzed and evaluated to help determine if a preferential connection has been established. If a preferential connection has been established and manure has made its way into the drain tile, the Department will require future manure application on that field to halt and additional precautions be taken. Section 7 of the *North Dakota Livestock Program Design Manual*, as required by NDAC § 33-16-03.1-08(3), provides the authority to ensure the waters of the state are protected.

- j. Comment: Who is going to monitor and enforce the nutrient management plan if manure is over applied, setbacks are not taken, and or liquid manure enters water ways in fields.

Department Response: The NMP will be inspected annually. Please refer to comments XXXI(c) enforcement and XVIII(b) inspections.

- k. Comment: Manure fertilizer is not a plant nutrient balanced product. In other words, the ratio of nitrogen (N) to phosphorus (P) is such that applying enough N for crop nutrient requirements will result in excess P being added to the soil. It is possible for P to reach levels high enough to cause it to move off-site and get into surface water.

Department Response: The Department agrees that manure is not a plant nutrient-balanced product, but by following an NMP and having a diverse cropping system, it is possible to manage P from leaching fields. Additives such as Phytase can be added which result in a more plant-balanced ratio.

- l. Comment: Accordingly, Linderman (2012) recommended ND producers apply enough manure to meet the P requirements of the crop and use commercial fertilizer to bring the N to a desired level. Similar

recommendations have been made for MN (Schmitt and Rehm 1992) with application rates based on soil tests for P. Although the soil tests submitted as part of the NMP (Appendix D) indicated a “low” phosphorus risk, environmental concerns would suggest using the University recommendations for nutrient management.

Department Response: Please refer to response to comment VIII(b) manure application.

- m. Comment: Based on the incomplete information provided on five of the six contracts, it is difficult to determine what crops are to be grown and possible crop rotations. Acres reported on the land easement agreement appear to be total cropland acres of FSA cropland acres. Without the listing of the crops to be planted on the contract acres, it is difficult to determine how much liquid manure can be used beyond year one.

Department Response: The Department determined acres needed by utilizing the spreadable acres, not the FSA cropland acres. The Department also takes the average of the nutrients needed in regard to the type of crops to be used in the rotation. Annual inspections, as outlined in response to comment XVIII(b) inspections, will be used to verify that the NMP is being followed.

- n. Comment: Setbacks are included but only include water ways and non-cropland areas such as permanent wet areas, shelterbelts, and farmsteads. No setbacks are indicated for compliance with township ordinances. Subtracting the risk assessment reported with from the total cropland acres provided the setback acres (Table 2). Also, acres for the CAFO location (NW ¼ 4-139-54) have not been removed from the fertilization application acres. The legal description for fields 18 & 19 are incorrect, causing further confusion. Total acres for field 16 & 17 add up to 207.4 acres. Errors and omissions in this data set complicate the calculation of how many acres are available for liquid manure application.

Department Response: Please refer to response to comments CV(a) zoning and LXIV(g) spreadable acres. The errors in acreages and legal descriptions have been noted and corrections made.

- o. Comment: If the 8,222 gallons of manure necessary to reach the N goal were applied, 178 pounds of P<sub>2</sub>O<sub>5</sub> would be added to the soil and be available in the first year. This far exceeds the maximum recommended level of 102 pounds per acre. If the manure were applied using the P soil test to determine the gallons per acre, 1,482 acres would be required to use the 7 million gallons of liquid hog manure produced per year.

Department Response: When reviewing an NMP, the Department determines how many acres would be needed to use up nitrogen and

phosphorus in hog manure within a year. The Department bases their calculations on county yield averages and not the yield goals by the producer. The goal is to spread manure over more acres in order to reduce the risk of manure runoff from the fields. In order for the producers to meet their yield goals, they will have to supplement with commercial fertilizer. Please refer to the updated fact sheet and NMP. Based on manure production calculation, the facility would have 284,256 lbs of N and 218,562 lbs of P available each year for application on 5,725.52 acres, an average of 49 lbs N per acre and 38 lbs P per acre, well below agronomic rates. Manure may be applied to meet agronomic rates for the crops grown.

- p. Comment: The liquid hog manure would add K to soils every other year with this overstated because of the plant citing acreage was included and no township setback acres are included in the nutrient management plan.

Department of Health: In regard to Howes Township setbacks, please refer to response to comment CV(a) Zoning. Please refer to response to comments XLVIII(e) manure quality, and VIII(b) manure application. Currently, potassium (K) is not listed in the *Standards of Quality for Waters of the State*, NDAC 33-16-02.1, and is not used in the evaluation of the NMP.

- q. Comment: Soil maps showing the “very limited” areas for each field contracted (by quarter section) are presented in Appendix E. For the land that has been contracted for manure application, 1,408.6 acres are classified as 1.0, or “very limited” (Table 7). These soils are classified as Hamerly-Tonka and characterized by slow water movement or ponding. Applying liquid manure to these soils could present serious environmental problems.

Department Response: Please refer to response to comments CXXX(b) and (c) soils.

- r. Comment: Much of the tilled land identified in the acreage contracts drains directly into the Maple River, which in turn ends up in the Red River. This could become an international problem if nitrogen and phosphorus leach or erode into the local waterways. It is also important to know who will be responsible for monitoring and enforcing sound environmental regulations. Based on the data currently available, it does not appear that the nutrient management plan for this CAFO is sustainable.

Department Response: The drain tile will require monitoring, and 100-foot setbacks will be in place. Please refer to response to comment XXXI(c) enforcement. In regard to the NMP being sustainable, please refer to the updated application as more acres for manure spreading are now

available which makes this proposed facility viable.

- s. Comment: Excessive rainfall could make their containment pond overflow. Sump pumps will dump into that pond from the drain tile under and around this pit. Manure waste will leak overtime from this 758 ft by 169 ft pit, because a concrete structure that large will crack. So, contaminated water from this containment pond will be pumped out onto the land and flow southeast past our farm and end up in the flat slough bottom that has wetlands in it.

Department Response: Please refer to response to comments XXXIII(b) the containment pond, L(a) waterway, and XVIII(b) inspections.

- t. Comment: Who will be held responsible when these wetlands are contaminated by a commercial hog operation? Yes, they say there will be a dike surrounding it. Dikes can break under heavy rainfall. Some large CAFOS (Concentrated Animal Feeding Operations) like this have pumped manure over the dike into the fields just to save their dike. A major spill from the pit (which has been built essentially above ground due to the high water table) at this site should be a concern, as well as ground water contamination.

Department Response: Please refer to response to comments XIX(b) groundwater, XXXIII(b) the containment pond, and XXXI(c) enforcement.

- u. Comment: You may feel they have done enough to sneak in under the current state laws, but I encourage you to check into all the complaints they have encountered in South Dakota.

Department Response: In regard to Rolling Green's conduct in other states, please refer to response to comment XXXIV(b) compliance history.

- v. Comment: Known fact is that land closest to the manure source gets over-fertilized. (been there, done that). Even when it is knifed in the soil there is some that lays on top and spilled on headlands. If the fall soil conditions freeze early they may try to get a permit to lay some on the surface. What else can they do when they need room in the manure pit. Even though phosphorus does attach to the soil, it can move by surface runoff. Whatever lays on top of the soil can move. Over 40% of the soil they applied for as acres to knife-in their manure is mapped Hamerly-Tonka soil. This type of soil is very limited in its ability to take-in the manure and have the soil and plants use it. In other words, 40% of the soil they plan to apply manure to is not suitable to take the manure (see USDA Web Soil Survey — Manure Management). This type of soil has a high water table and can be often saturated. This means plants will not typically be growing as well in these areas and so manure applied here will not be taken up as readily. In these conditions, nitrogen will likely

denitrify and be lost to the atmosphere or potentially contaminate the water it is applied into.

Department Response: Please refer to comments VIII(b) manure application and CXXX(b) and (c) soils.

- w. Comment: Also, numerous old farmsteads exist in these fields where manure will be applied. This is a concern, because these old wells were just bulldozed over and not properly sealed. Over-application of manure will lead to water contamination through these unsealed, buried old wells.

Department Response: Please refer to response to comment LXIV(k) wells.

- x. Comment: Lastly, the geology of this immediate area of the county (near the beach ridge) indicates there are eskers below the ground where this great amount of manure will be stored and applied. These sandy/coarse underground soil lens are significant features of the soil that make the water movement below this area prone to more rapid lateral movement. Unique soil conditions causing unknown water movement below this site and below the fields that will be applied, is very concerning.

Department Response: A site-specific soil investigation was conducted at the site of the manure storage structures. Please refer to comments VIII(b) manure application and XIX(b) groundwater.

- y. Comment: Look close here there are four old farmsteads where extra manure could easily be put down. Just over a mile away in the NE qtr. Of sec. 6, the Von Banks still water their garden and flowers with their shallow well. Yes and by the way you do not have on file the history of this well just like many more in the area? Your list of wells in the application is very incomplete. That should be a concern to you. Also there is a shallow well in the SW qtr. Of sec. 10 in Tower township that the family still uses and less than a half mile away the plan is to apply manure there (8,000 gallons/acre). The shallow well is four foot square with a pump in it that pumps to the house and also to outside hydrants.

Department Response: Please refer to response to comment LXIV(k) wells. Section 4 of the *North Dakota Livestock Program Design Manual*, as required by NDAC § 33-16-03.1-08, is used to evaluate all registered wells within a prescribed distance from a proposed facility.

- z. Comment: Pumping through hoses is the preferred way but there is a limit how far you can pump this manure, especially when you have to try and cross 1-94, state highway 38, BNSF Railroad tracks and the Maple River. Trucking costs a lot more than pumping and over half the fields would need to have it trucked. To put this in perspective, to haul away a qtr. Of

harvested corn, you would need around 25 semi loads. To apply a qtr. Of land with this hog manure, you would need around 125 semi loads! Tough on the township roads? So in closing over half of the acres signed up are unrealistic acres and if these acres were applied, the cost would not be the 60-70% range of commercial fertilizer like we were told. And if it is applied there is definite risk to the watersheds as outlined in my presentation.

Department Response: The cost and feasibility of trucking versus pumping manure through hoses and township roads are beyond the scope of the proposed permit and outside the Department's authority. Please refer to response to comment VIII(b) manure application.

- aa. Comment: The presence of this ground water presents additional very concerning issues. One of these concerns is that the shallow ground water has not been tested for its content.

Department Response: Please refer to response to comment XIX(b) groundwater. The Department can also find out the quality of the groundwater in the area by using the information provided by the State Water Commission or by requiring sampling of the groundwater on site.

- bb. Comment: *"Leak Detection: Drain tile will be placed under the deep pits of the gestating barn and the isolation barn that will serve a dual purpose: (1), it will collect any clean water from outside the deep pits, thereby acting as a leak detection system, and (2), it will collect and clean water from outside water sources from applying pressure to the walls as well as premature deterioration of the concrete. Water collected in the drain tile will be collected in a shallow containment pond."*

That statement acknowledges the potential for leaks in the pits. Thus, the real threat of the sump water being "effluent" and not "clean water". There is a concern that if a leak develops, there is no way of addressing it without a very interruptive structural repair effort, say nothing of the timeliness of actions before the leak is detected and acted upon. Concerned Citizens demand the following concerns be addressed by adding the subsequent resolutions/mitigation efforts be added to the Approval Conditions. Due to the extremely high potential of hydrostatic pressure under the deep pit floor slabs, increase the granular subgrade to at least the depth of the tile (4" or 6" respectively) it is feeding, reduce the spacing of the tile to 20' centers, and require that the granular fill be a free draining "pea rock" or similar material. These changes will be necessary to reduce the hydrostatic pressure from beneath the pit slabs, and to carry away any "leaks" from the pit that may contaminate the ground water. Further, to reduce the potential for ground water and surface water runoff, the sump water must be treated like "effluent" and be "completely

contained” not just retained. It cannot be allowed to run across the property to the south. This containment pond must meet the requirements outlined in the ND Department of Health, North Dakota Livestock Program Design Manual, Section 5 and any other applicable requirements of that publication. As mentioned previously, this sump water has not been tested for salts, alkalinity, etc.

Department Response: The discharge of ground “sump” water is not regulated, as the discharge is groundwater and is not a process waste stream. Typical groundwater discharges are tile-drained fields and sumps from residential and commercial buildings. Weekly inspections by the facility, annual inspections by CAFO Program staff, and annual sampling of the sump water will be performed to monitor and evaluate the integrity of the concrete pits.

- cc. Comment: The permit application design will have this water running across the neighboring agriculture crop land (to the south). This must not be allowed for two reasons; first, it has the potential to “poison” the topsoil and reduce crop yields by adversely affecting the PH balance in the soil. Secondly, it will result in an almost continuous flow of water into field drainage cuts that already collect the bulk of the upstream water and make the SW Y4 of Section 4 one of the last fields that can be accessed in the spring due to wetness. Allowing the increased flow of surface water and adding shallow subsurface water will exasperate this existing condition making it impossible to till and plant in a timely manner each spring, thus negatively impacting the neighbor’s crop operations (see photo #1 for confirmation of the water flow).

Department Response: Please refer to response to comment L(a) waterway.

- dd. Comment: The pit construction (slabs and walls) will be subject to considerable forces both hydraulic (from the manure within and from ground water) and from surloading of the adjacent site. Further the concrete will be subject to severe sulfate exposure due to the contained manure and potential contaminated ground water. These concrete assemblies are required by the North Dakota Livestock Program Design Manual to meet the requirements of ACI (American Concrete Institute Standards) 318-89, ACI 350-89 and ACI 351R-93/AWWA (1994).

Department Response: The design plans, design calculations, and specifications prepared by a registered professional engineer conform to the guidelines set forth by the Midwest Plan Service (MWPS). The MWPS is an educational publishing consortium of 12 U.S. universities and the USDA. According to the *North Dakota Livestock Program Design Manual*, Section 5.4.1 Concrete Storage Tanks, as required by NDAC § 33-16-

03.1-08, the MWPS is an accepted source of standards in regard to concrete structures. The MWPS-36 Rectangular Concrete Manure Storages 1<sup>st</sup> Edition and 2<sup>nd</sup> Edition were the primary references used by the engineer. The 2<sup>nd</sup> Edition incorporates the 2005 *Building Code Requirements for Structural Concrete and Commentary* (ACI-318-05/318R-05) of the American Concrete Institute (ACI). The design calculations submitted by the engineer designate is what is used for the compressive strength of specific structures according to the MWPS-36 publications. The rebar size, spacing, and coverage values used by the engineer also conform to the guidelines of the MWPS-36 publications.

Note the “Specifications” section in the fact sheet has been updated in regards to comments received.

- ee. Comment: Mix design, rebar coverage and placement are all in question. With the amount of initial curing shrinkage, due to lack of control joints, and temperature movement (5+” as calculated under the Design/Plan Analysis portion of this report), due to the size and lack of expansion joints, the concrete structure will see a deterioration after only a couple years of seasonal temperature stress and movement.

Department Response: Please refer to response to comment CXXIX(dd) design.

- ff. Comment: As per publication ACI 350 — Requirements for Concrete Exposed to Sulfate-Containing Solutions, Table 4.3.1, the mix design (required to be 5000 PSI compressive strength and sulfate resistant additives — pozzolan, utilized), pit liner, rebar coverage and placement all must be integrated into the Approval Conditions to reduce potentials for deterioration of the concrete structure and subsequent environmental contamination. It is an engineering fact/standard of care, that when loading can be expected from either side of a foundation wall, a double matt (inner and outer) should be utilized to contain the tensile forces on each of the opposite face of the wall and to minimize elongation of rebar to minimize how much a crack can open — thus minimizing leaks. The (illegal) Permit Application does not include a double matt. Further, it is common practice (and also contained in the North Dakota Livestock Program Design Manual, page 36) to protect “steel and other corrodible material”. To meet this requirement, the Permit Application would require epoxy coated rebar and misc. embedded items (anchor bolts, embedded angles etc.) be fabricated of stainless steel items in the Approval Conditions to protect this facility (if approved) into the future. None of these requirements have been met.

Department Response: Please refer to response to comment CXXIX(dd) design. The design of the walls does include a double matt in the

concrete requirements submitted by the engineer. There is no indication in the Midwest Pan Service (MWPS) - 36 publication that epoxy-coated rebar is required. The design includes the rebar coverage which will serve as protection for the rebar as indicated in Table 2-1 of the MWPS-36 publication. Section 5 of the *North Dakota Livestock Program Design Manual* is what references MWPS as an accepted standard. This is required under NDAC 33-16-03.1-08.

- gg. Comment: One of item, which may seem insignificant, is the specification, location and details for water stops both at construction joints (joints between concrete pours) and assembly joints (joints between walls and slabs etc.). These assemblies are critical to contain contamination from “leaking” into the ground water. These assemblies need to be of high quality, carefully specified and detailed, and finally, inspected.

Department Response: Please refer to response to comment CXXXIX(dd) design. A waterstop detail provided by the engineer has been included in the design plans. Section 4 of the Material Specification 537, Nonmetallic Waterstops, indicates the inspection and testing methods required to be conducted set forth by the American Society for Testing and Materials (ASTM). Section 5 of the *North Dakota Livestock Program Design Manual* is what references ASTM as an accepted standard. This is required under NDAC § 33-16-03.1-08.

- hh. Comment: The biggest singular requirement that must be placed into the Approval Conditions, is to require that the site elevation (individual deep pit structures) be raised above the established ground water table. Failure to do so will immerse the manure pits well into the established water table and expose the water table to an inferior design destined to leak and cause contamination. The invert of the drain tile should be at least 1’ above the reported water table due to seasonal variation and some “freeboard” to protect the ground water from potential contamination. This translates into setting the subgrade of the GDU/Isolation Facility and the Gestation Facility to approximately 1145.0, effectively getting the pits and the associated drainage assemblies approximately 1’ above the established ground water elevation.

Department Response: Section 5 of the *North Dakota Livestock Program Design Manual* does not require the construction of a concrete manure storage structure to be located above the water table. The soil investigation for this site revealed a local perched water table. As indicated in the permit application, a sump system will be used to artificially lower this local perched water table to relieve the hydrostatic pressure from the structure.

- ii. Comment: Given the size of these facilities, and the vastly differing bearing characteristics of the soils, there is a very high potential of differential settlement within the footprint of each facility and between the facilities. There is a 10" connecting PVC sewer pipe that connects these two facilities (100' apart), and it is set at .5% slope and is gravity fed. The potential for problems include constant plugging to outright pipe shear/failure and subsequent ground water contamination.

Department Response: Please refer to response to comment CXXIX(dd) design. The facility is required to maintain the manure management system, including the connecting sewer pipes. If this situation were to arise, the facility would need to have it fixed to return to proper operation and management of waste. This requirement is enforceable under NDAC § 33-16-03.1-08(1).

- jj. Comment: Given that this structure is an "agrarian" occupancy, and that it is not subject to a local jurisdiction of authority, in terms of general building code enforcement, however, due to the size, use, and intensity of its function, and potential of risk to animals, people and environment, NDDH must require that basic building plans of the superstructure be submitted for some level of review. Only site design and foundation details have been submitted under this permitting exercise. This when one of the buildings will be subject to over 5" of temperature movement in its foundation, and over 7" of temperature movement in the metal structure above (see expansion calculations at the beginning of this section). Critical construction activities and assemblies such as excavation (inspection of trenches), rebar placement, concrete forms, waterstops, etc. all should be subject to special inspections and/or independent inspections from a qualified construction inspection agency.

Department Response: Neither *The North Dakota Livestock Program Design Manual* Section 3.2. nor NDCC 61-28 requires the department to review structures for compliance with general building codes. However, the rules do require the owner to design and build a facility to allow for the continued compliance with environmental regulations. Please refer to response to comment CXXIX(dd) design.

- kk. Comment: No information is included in the Permit Application that deals with specific movement of the air through the facility, especially from the manure pits. Bio-filtration is not included in the submittal under Section 9A: OPERATION & MAINTENANCE GUIDELINES, Article IV. (Odor Control). It has been mentioned several times by supporters of this facility, that claim to have knowledge of this fact, that, the facility will be use "odor filtration" and that "...odor will not be a problem - These are lean and green and there are "after burners" that eliminate the smell...". Given that assurance, the Concerned Citizens demand that Bio-filtration of the

exhaust air leaving these facilities be installed and maintained as an Approval Condition.

Department Response: Please refer to response to comments XX(a) air quality, I(b) setbacks, and XVIII(a) odor. Rolling Green meets the setback distances in protecting air quality with the current submitted design plans which did not list bio-filters. If it is proven through testing that air quality violations have occurred, then the Department would approach Rolling Green on addressing a resolution with air quality compliance. This is established in NDAC § 33-16-03.1-08(8).

- II. Comment: The concern for flammable build-up remains in these pits and with documented fires which results in almost total loss of livestock. One such fire which occurred May 11, 2015 near Jasper, Minnesota, resulted in the death of two workers that were cleaning the facility, and a total loss of structure.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority. Please refer to OSHA for worker safety concerns.

- mm. Comment: If you buy into this being an Agrarian Occupancy, the facility is exempt from the Model Codes of the State of North Dakota except Mechanical/Plumbing Codes and Electrical Codes. However, consider the intensity of use and size of these buildings (the Gestation Facility alone is more than 2x and approaching 3x the size of a football field — see Photo #5.1), the potential of negative environmental effects, and the Life Safety of the workers in this facility. In an effort to protect the lives of the workers, mitigate the potential costs in loss of property and insurance claims, and to protect the environment, we ask that the following concerns in the application, concerns over the quality of the design documentation, and ultimately concerns of the configuration and details of the design itself, be carefully considered prior to the issuing of the permit itself, and that notwithstanding if a permit is issued, when considering and stipulating the official Approval Conditions of the permit.

Department Response: Please refer to response to comment for CXXIX(dd) design. Worker safety is handled by the Occupational Health and Safety Administration. Property loss and insurance claims are beyond the scope of the proposed permit and outside the Department's authority.

- nn. Comment: Concerns on the permit application-technical specifications.

Department Response: Please refer to response to comment VII(a) laws and rules and CXXIX(dd) design.

oo. Comment: The (illegal) Permit Application site plan indicates a 5 row shelter belt/tree planting surrounding the 40 acre site, and Part 9C: Odor Control Plan, Article G. Best Management Practices, Paragraph 4 of the (illegal) Permit Application states “Vegetative barriers is proposed as a part of the plan to reduce odor” is also part of the (illegal) Permit Application. The concern is that there are no planting schedule/planting details/specifications in the permit application to establish this “vegetative barrier” and it will not get installed unless mandated. In the event it would be installed, it would be several years before it would have in any impact of beneficial service unless substantial specimen plants are utilized and maintained.

Department Response: Please refer to response to comments XX(a) air quality, I(b) setbacks, and XVIII(a) odor. Rolling Green meets the odor requirements by having more than the required setback distance from the closest resident. Rolling Green may choose to establish a vegetative buffer but is not a requirement under NDAC § 33-16-03.1

pp. Comment: The (illegal) Permit Application indicates that water will be gained from onsite wells, these are not located on the plans (to insure safe setbacks from compost structures and runoff areas). It has been confirmed that the Applicant has approached Cass Rural Water for service to the site. It is assumed that the water usage will be in the magnitude of 500,000 gallons per day. Concerned Citizens demand, in the event that rural water is used, that a statement from Cass Rural be obtained to indicate this does not endanger the reliable supply of water to the City of Buffalo and the surrounding water users and that any utilization/installation cost of this service be borne by the Applicant, and not passed on to the current users.

Department Response: This is beyond the scope of the proposed permit and outside the Department’s authority.

CXXX. David Hopkins

a. Comment: Given the anticipated plans for manure application on local soils from this facility, it is incumbent upon me to comment on the inadequate evaluation of local soil and geological information contained in Public Notice Number: ND-2016-007 posted on the Department of Health website.

Department Response: Please refer to response to comment VIII(b) manure application.

b. Comment: Results of running a manure application rating on this area show 36% of the land is very limited, largely due to shallow groundwater,

ponding potential, or slow water movement in subsoils. Another 22% of the area is rated by Web Soil Survey as somewhat limited, but that is likely an underestimate given the nature of soils and sediments in this region of the township, as will be discussed below. Note the “Soils” section of the fact sheet has been updated.

Department Response: The web soil survey is a tool prepared by USDA to help producers make management decisions. The manure application rating from the web soil survey is based on a number of soil properties that affect not only environmental considerations but management challenges as well. The soil survey information is a decision tool for producers but does not create a regulatory requirement. Ponding and slow water movement may prevent manure application at times of the year, but also provide additional environmental protection. Rolling Green’s NMP reduces the risk of nutrient leaching and runoff on cropland. Manure may be applied to any croppable soils if the NMP and applicable guidelines are followed. For more information on the NMP, please refer to response to comment VIII(b) manure application.

- c. Comment: In addition to the very limited and somewhat limited rating identified on the Web Soil Survey report, other sedimentologic evidence suggests that local conditions are not optimum for manure application on a continuing and broad-scale basis. Most of the upland glacial till I have observed in this area consists of stratified lenses around the 2 to 3 foot depth that students often misname “play structure”; it is not. Instead these laminae result from what field soil scientists recognize as “water worked till”, which has much greater lateral rather than vertical hydraulic conductivity. This anisotropic material will allow effluents released from manure application to move laterally at depth. Even though manure is applied to a Barnes-Buse soil mapping unit, at some point, leachates will move downslope and influence adjacent map units or shallow groundwater.

Department Response: Manure will be applied in the A horizon, separated from the E horizon at 13-19 inches and Bt horizon at 24-34 inches that may transmit water laterally in the Tonka series. The nutrients in the manure are less soluble and less likely to move than commercial fertilizer currently applied to these fields. For more information on the NMP, please refer to response to comments VIII(b) manure application and CXXX (b)&(c) soils.

- d. Comment: Bluemle named these the Norma, Cuba, Fingal, and Alice strandlines (Bluemle, 1991, Table 1, p. 80) and he stated that these are “complex features that are difficult to trace laterally.” Such features would certainly affect both vertical and lateral groundwater movement in areas that might be chosen for manure application; these features would not be

routinely identified in county soil survey maps.

Department Response: Please refer to the updated NMP and response to comments VIII(b) manure application and CXXX(b) and (c) soils.

- e. Comment: Lastly, detailed surficial geology mapping in western Cass county reveal many Quaternary fluvial deposits known as eskers. These coarse textured deposits were formed in flowing streams below glacial ice. In upland areas there would be very poor filtering of applied manure, and given the low surface area of these soil textures, pollutants could move rapidly with excess rainwater or snowmelt.

Department Response: A site- specific soil investigation was conducted at the site of the manure storage structures. Please refer to the updated NMP and response to comment VIII(b) manure application.

CXXXI. Tim Frueh

- a. Comment: I am requesting information on the projected amounts of VOC components, Ammonia emissions, particulate matter emissions, endotoxin emissions, and microorganism emissions that will be expelled into the air from this proposed operation. I have deep concerns of the quality of air, my Family and community will have.

Department Response: Please refer to response to comments XX(a) air quality, XXXIII(a) hydrogen sulfide and ammonia, and XXXV(d) human health.

CXXXII. Terryl Grieve

- a. Comment: The environmental impacts of air, water and soil pollution are of great concern. I read about fumes emitted into the air, odor reducing chemicals changing the composition of manure and when combined and entering the air have an adverse effect on the environment. Hydrogen sulfide, ammonia, other gases, vapors particle pollution, decreased lung function, cardiovascular ailments, headaches, fatigue, burning eyes and on and on. How can this be good for the air, water, land or humans?

Department Response: Please refer to response to comments XX(a) air quality, XVII(d) air, water & quality of life, XXXIII(a) hydrogen sulfide and ammonia, and XXXV(d) human health.

- b. Comment: I don't understand how something of this magnitude to the community and surrounding area has gotten this far with most everyone being left in the dark. If it is such a good opportunity it seems those involved would have been happy to share the news with those that live here.

Department Response: Please refer to response to comment XVII(a) Public Notice.

- c. Comment: Who oversees this type of operation? Are there inspections, regulations, fines, and penalties? If regulations are not followed, then what? Does the process to remedy the situation, if even possible, have teeth or is taking the penalty a better business decision than finding a solution to the problem?

Department Response: The Department of Health oversees this type of operation. Please refer to response to comments XVIII(b) inspections, XXXIV(n) the CAFO Program, and XXXI(c) enforcement.

- d. Comment: Several residents have health issues, including my mother who has COPD and a heart condition. How will this affect her?

Department Response: Please refer to response to comment for XXXV(d) human health.

- e. Comment: I'm concerned my daughter will no longer allow my grandson to visit us for weeks at a time as he has done all his life.

Department Response: Thank you for the comment. This is beyond the scope of the proposed permit and outside the Department's authority.

- f. Comment: Will I be able to continue daily walks and bike rides, which often take me within a mile of the proposed site? If I do, what risks am I taking? What long term effects may there be?

Department Response: Please refer to response to comment XXXV(d) human health.

- g. Comment: I ask you to read the letters you will be receiving from our community and consider all concerns; health, environmental, odor, declining property values.

Department Response: The Department reviews all comments received during the public comment period and responds to each comment received during the public comment period.

CXXXIII. Nathan Pesta

- a. Comment: An engineer from DeHann, Grabs & Associates that designed Rolling Green's plans in regards to construction, nutrient management and composting. Used the Midwestern Plan Service and also followed the building codes from the American Concrete Institute.

Department Response: Thank you for the comment.

CXXXIV. Dan Leino

- a. Comment: Concerned with quality of air in regards to family asthma and issues that may arise from H1N1.

Department Response: Please refer to response to comments XX(a) air quality and XXXV(d) human health.

CXXXV. Darrel Lies

- a. Comment: The North Dakota Farm Bureau is in support of the enhancement and expansion of livestock and farming in North Dakota.

Department Response: Thank you for the comment.

CXXXVI. Craig Jarolimek

- a. Comment: Is a pork producer from Forest River, North Dakota and stated that the Department does inspect them and checks records. The facility is a good neighbor and is running well.

Department Response: Thank you for the comment.

CXXXVII. Sean Simpson

- a. Comment: Is a representative of Rolling Green and the Pipestone system. Over 700 employees work day in and day out and they are not getting sick unlike the articles that are being referenced. Sometimes you will smell the facility but not all the time. Rolling Green is here to be a good neighbor.

Department Response: Thank you for the comment.

CXXXVIII. Barry Kerkaert

- a. Comment: Is a veterinarian who signed the permit application for Rolling Green. Helps coordinate 400 independent farmers, small farms, into what is called the Pipestone System. Is a true believer of concentrated animal feeding operations as a sustainable food source for the United States.

Department Response: Thank you for the comment.

CXXXIX. Tom Bodine

- a. Comment: A representative from the Department of Agriculture. The Department of Agriculture works to enhance all forms of agriculture. Their

job is to assist current and new producers in their aspirations to enhance and expand their operations. Expanding any form of livestock production in the state will add value to our crops and our rural communities. The Department of Agriculture is here to educate and help try to address concerns.

Department Response: Thank you for the comment.

CXL. Tamra Heins

- a. Comment: Executive director of the North Dakota Pork Council. The Pork Council came up with the “We Care” initiative which covers seven basic principles that is involved in the Pork Quality Assurance program. All Pipestone systems will be involved in PQA and will be certified. Pigs have been moved into barns, trichinosis in pork as basically been eliminated, carbon footprint has been reduced along with water and land usage.

Department Comment: Thank you for the comment.

CXLI. Scott Ressler

- a. Comment: Environmental services director of the North Dakota Stockman’s Association. Animal agriculture is an important driver for North Dakota, and there are opportunities towards growth across the state.

Department Response: Thank you for the comment.

CXLII. Seth Bacon

- a. Comment: President of the North Dakota Pork Producers Council but is not here on behalf of the council, but as a resident of North Dakota. Grew up around pigs and is now a partner of a cooperative that raises pigs in North Dakota.

Department Response: Thank you for the comment.

CXLIII. Bill Marcks

- a. Comment: When I recently was made aware of the proposed pig CAFO, friends of mine from other areas of the state said, “Don’t waste your time; the decision has already been made in Bismarck.” Their being here today reassures me that our, they listen to us, our system does work. The proposed concentrated animal feeding operation to be located southeast of Buffalo could be devastating to the quality of life I enjoy now with my friends, my family, neighbors, in our small community of about 200. Our group of Concerned Citizens of Buffalo is certainly not opposed to local family farms with animals, but resists to corporate control and potential

devastation of our water and air quality and much more.

Department Response: Please refer to response to comment XVII(d) air, water, and quality of life.

CXLIV. Kathy Tyler

- a. Comment: Our neighbors include numerous farmers, both active and retired, a small organic dairy of about 700 head is about a mile south of us, a power plant and then milk production facility, so we are varied in our neighborhood. Pipestone – Teton completed their facility in our neighborhood last spring. It is located about 5/8 of a miles from my front yard. Within three months the smell started. If that air from those pits was not exhausted, those pigs would not survive, and that is the air that they're sending out to us, their neighbors. Our neighbors and we have been keeping track of the smell on calendars since last August. What it boils down to, that if you are downwind, you will be affected by the stink coming from the barns. I have personally smelled the odor up to three miles away. Luckily, we've had no one in our neighborhood has experienced health problems as of yet. Require biofilters be installed and maintained so as to consistently achieve this goal.

Department Response: Please refer to response to comments I(b) setbacks, XX(a) air quality, and XXXI(c) enforcement.

CXLV. Lois Smith

- a. Comment: I believe in the power of education, the knowledge gained by reading, and the value of the published word. I strongly recommend that the North Dakota Department of Health take the time to read this book: *The CAFO Reader: The Tragedy of Industrial Animal Factories*, edited by Daniel Imhoff. The rise of the CAFO industry around the world has become one of the most pressing issues of our time.

Department Response: This book is an overall generalization of the CAFO industry and does not specifically relate to the proposed facility. Please refer to response to comments I(b) setbacks, VII(a) laws and rules, XXXI(c) enforcement, X(a) antibiotics, XVII(d) air, water, and quality of life, XVIII(a) odor, XX(a) air quality, XXXIII(a) hydrogen sulfide and ammonia, XIX(b) groundwater, XVIII(b) inspections, XXXIV(n) the CAFO Program, XXXV(d) human health, XLI(b) MRSA, VII(b) manure application, XXIV(c) runoff, XXV(f) frozen ground, XLVIII(e) manure quality, XLVIII(b) pig mortality, L(a) waterway, XXXIII(b) the containment pond, XXXIV(b) compliance history, LXIV(k) wells, and XLIX(g) flooding.

CXLVI. Rocky

- a. Comment: We have an architect and a fertilizer guy. We have more power than you got up there in North Dakota's Health Department. Tell these people to go back to Minnesota and come back with a new plan.

Department Response: The Environmental Health Section of the North Dakota Department of Health is comprised of scientists, engineers, geologists, and staff from other disciplines who follow the rules and regulations the Department is charged with implementing.

CXLVII. Kenneth Ronning

- a. Comment: Somewhat apprehensive as to what the CAFO close to our city could have on the air (stench and unpleasantness) and possibly even on our health.

Department Response: Please refer to response to comments XVIII(a) odor, XX(a) air quality, and XXXV(d) human health.

CXLVIII. Sherry Peterson

- a. Comment: Our life style would change drastically with the building of the 9,000 hog barn. I wonder how much contaminated water we are going to drink and use before it is realized and deemed contaminated?

Department Response: Life style change is beyond the scope of the proposed permit and outside the Department's authority. Please refer to response to comment XIX(b) groundwater. The city of Buffalo also obtains its drinking water from Cass Rural Water which is located near Page, ND, about 30 miles away.

CXLIX. Cynthia Berget Allen

- a. Comment: Concerned about health issues and environmental impact.

Department Response: Please refer to response to comments XXXV(d) human health and VII(a) laws and rules.

CL. Janice Diemert

- a. Comment: Concerned about having to curtail outside activities because of particulates in the air. Doesn't find the justice in endangering our air quality and water supply.

Department Response: Please refer to response to comments XX(a) air quality, XXXIII(a) hydrogen sulfide and ammonia, and XIX(b) groundwater.

CLI. Betty Fraase

- a. Comment: Serious concerns about this pig facility so close to my house and the manure application proposed for farmland directly across the road from my 640 acre farm and home. Worry that the foul gases and fumes will impact my life on a daily basis making me more susceptible to anxiety and stress, and other serious illnesses.

Department Response: Please refer to response to comments VIII(b) manure application, XX(a) air quality, XXXIII(a) hydrogen sulfide and ammonia, and XXXV(d) human health.

CLII. Jessica Peterson

- a. Comment: The pig factory will bring significant damage to our community, family, and friends. There is significant research out there that proves there are health risks with breathing in the pathogens that can be emitted in the air from pigs. There is also significant research out there stating how most of the CAFO's produce way too much manure that the land can't handle which leads to over application of the manure/fertilizer which the crops cannot absorb. Therefore, that may lead to run off and contamination of our drinking water also. Aside from all the health risks there is also a significant economic impact that would negatively affect our community. Property values would decline and most importantly we would lose some of our lifetime residents.

Department Response: Please refer to response to comments XX(a) air quality, XXXV(d) human health, VIII(b) manure application, and XXIV(c) runoff. Economics and property values are beyond the scope of the proposed permit and outside the Department's authority.

CLIII. Terryl Grieve

- a. Comment: The respiratory symptoms from exposure to the air around an operation this large can be nothing but detrimental to those within its path. Will negatively impact mom who has COPD. Depression and PTSD are medical conditions associated with the odor from these large operations.

Department Response: Please refer to response to comments XVII(d) air, water, and quality of life, XVIII(a) odor, XX(a) air quality, and XXXV(d) human health.

CLIV. Carolyn Pfeifer

- a. Comment: The amount of manure and other waste products is found to be enormous. Living in the Red River Valley where we are subject to periodic flooding. Would hate to see our water system threatened by the run-off from this farm. Worried about the allergens from this operation

which will be released into the air.

Department Response: Please refer to response to comments VIII(b) manure application, XLVIII(b) pig mortality, XIX(b) groundwater, XXXV(d) human health, and XLIX(g) flooding.

CLV. Carolyn and Allen Dostert

- a. Comment: We both have health issues, including allergies, thyroid and migraines. We understand that the gases and fumes emitted from these hog CAFO's are detrimental to people with health issues like ours.

Department Response: Please refer to response to comments XXXV(d) human health and XXXIII(a) hydrogen sulfide and ammonia.

CLVI. Carolyn Dostert

- a. Comment: We are concerned how much weight these special interest groups will have regarding the location of this CAFO. The proposed building site and the land where the manure will be spread are too close to the family homes in our community and their locations will affect the health and well being of all the people who live in our community. Will you, the ND Department of Health, do your job, according to your own mission statement, to protect the health and environment of the taxpaying, voting citizens of our community and every citizen in the state of ND, or will you protect the business interests of special interest groups and out of state corporations?

Department Response: The department's mission statement is "*To accomplish our mission, the North Dakota Department of Health is committed to improving the health status of the people of North Dakota, improving access to and delivery health care, preserving and improving the quality of the environment, promoting a state of emergency readiness and response, and achieving strategic outcomes within available resources.*" We accomplish this by following the law using applicable science. Please refer to response to comments VII(a) laws and rules, XCIX(f) interests, and XVII(a) public notice

CLVII. Liane Rakow Stout

- a. Comment: Other states with large numbers of CAFO's have experienced 20 to 30 serious water pollution problems a year due to the manure application process to the fields. At the least the quality of daily life in our neighborhoods could be seriously reduced due to the foul-smelling air. Serious respiratory illness can result for workers, and we are especially concerned about similar health impacts, especially to our children and are senior citizens, which include me. This scenario robs our community of

local economic, environmental, and social benefits, plus saddles us with the costs. We will have to pay for roads used to haul thousands of pigs and truckloads of feed, all with reduced property taxes. Also concerned for the workers safety.

Department Response: Please refer to response to comments XVIII(b) inspections, XVIII(a) odor, XX(a) air quality, XXXIII(a) hydrogen sulfide, and ammonia, and XXXV(d) human health. In regard to economics, social benefits, roads are beyond the scope of the proposed permit and outside the Department's authority. Please refer to OSHA for worker safety questions.

CLVIII. Kent Beilke

- a. Comment: The emissions from the hog manure is well documented as causing health problems which includes respiratory problems especially in elderly, young and people with health problems already. Knifing in the manure over top of drain tile is very concerning to me.

Department Response: Please refer to response to comments XX(a) air quality, XXXIII(a) hydrogen sulfide and ammonia, VIII(b) manure application, and CXXIX(i) drain tile.

CLIX. Eileen Beilke

- a. Comment: Quality of life is a huge concern. I also cannot imagine that anyone could find it healthy for a facility this size to be within 3 miles and a manure application site to be within 1 mile of a K thru 3<sup>rd</sup> grade school.

Department Response: Please refer to response to comments XX(a) air quality and XXXIII(a) hydrogen sulfide and ammonia. Quality of life is beyond the scope of the proposed permit and outside the Department's authority.

CLX. Jennifer Fraase

- a. Comment: The United States Environmental Protection Agency's scientists have verified that large releases of ammonia and hydrogen sulfide from animal manure present a legitimate threat to our health.

Department Response: Please refer to response to comment XXXIII(a) hydrogen sulfide and ammonia.

CLXI. Ashley Moyer

- a. Comment: According to a University of Iowa and North Carolina study, human health is greatly impacted by large pig operations. The waste from these hogs will alter the soil and water quality.

Department Response: Please refer to response to comments XXXV(d) human health and VIII(b) manure application.

CLXII. Gary and Linda Milbrandt

- a. Comment: Why are there no monthly and annual reporting requirements for inspection for this large facility? What are the standards or requirements for air quality control in North Dakota? What are the standards for odor control in North Dakota? What are the standards in North Dakota for land application of the wastes?

Department Response: Please refer to response to comments XVIII(b) inspections, XVIII(a) odor, XX(a) air quality, and VIII(b) manure application.

CLXIII. Kimberly Von Bank

- a. Comment: I believe that this proposed 9000-hog farm will be detrimental to the health of the citizens in Buffalo and will negatively affect the water quality and environment in the Buffalo area. The research shows that the water and air quality would be affected in our community and these effects have the potential to lead to health risks to the citizens in the Buffalo area.

Department Response: Please refer to response to comments XVII(d) air, water, and quality of life, XVIII(a) odor, X(a) antibiotics, XIX(b) groundwater, XVIII(b) flies and disease, and XXXV(d) human health.

CLXIV. Corey and Kristi Hovelson

- a. Comment: Are Pipestone farms going to make sure all the waste gets pumped on time and doesn't overflow on the land and end up in our local rivers and drinking water? What if the waste doesn't get tilled in the ground right away and it rains?

Department Response: Please refer to response to comments VIII(b) manure application and XXIV(c) runoff.

CLXV. Craig Wendt

- a. Comment: There are a total of 46 pages of signed documents which account for 33,083 acres refusing easements.

Department Response: Please refer to response to comment VIII(b) manure application.

CLXVI. Randy Coon

- a. Comment: Based on the information we have been provided, there is not sufficient acreage available of the 7.0 million gallons of liquid hog manure produced annually. Acreage contracts overstate the available acres, and drain tiled land and Hamerly-Tonka soil problems have not been addressed. Over applying liquid manure to the soils could present serious environmental problems.

Department Response: Please refer to response to comments I(b) setbacks, CV(a)zoning, VIII(b) manure application, and CXXX(b) and (c) soils.

CLXVII. Gerald Marcks

- a. Comment: With all the air pollution (hydrogen sulfide, ammonia, methane, endotoxins, carbon dioxide and particulate matter) that will be released into the area, I am very concerned for my health.

Department Response: Please refer to response to comments XVII(d) air, water, and quality of life, XVIII(a) odor, XX(a) air quality, and XXXIII(a) hydrogen sulfide and ammonia.

CLXVIII. Jacqueline Marcks

- a. Comment: I fear the air emissions of hydrogen sulfide, methane, ammonia and particulate matter that will be released from this proposed hog factory and the manure that will be spread on land next to, and all around, our land will add to my medical problems.

Department Response: Please refer to response to comments XVII(d) air, water, and quality of life, XVIII(a) odor, XX(a) air quality, XXXIII(a) hydrogen sulfide and ammonia, VIII(b) manure application, and XXXV(d) human health.

CLXIX. Tracie Zaun

- a. Comment: It has also been brought to my attention that there will be application of the manure from the hog farm to fields that are adjoining land my husband and I farm.

Department Response: Please refer to response to comments VIII(b) manure application and XXXV(d) human health.

CLXX. Carol Beilke

- a. Comment: Studies have clearly documented respiratory symptoms associated with exposure to chemical components of CAFO air emissions

in particular, ammonia and hydrogen sulfide.

Department Response: Please refer to response to comments XVII(d) air, water, and quality of life, XVIII(a) odor, XX(a) air quality, and XXXIII(a) hydrogen sulfide and ammonia, and XXXV(d) human health.

CLXXI. Sheila Thompson

- a. Comment: What effect will the hydrogen sulfide and high levels of ammonia have on our health, the vegetables we grow, or more importantly our kids and grandkids?

Department Response: Please refer to response to comments XVII(d) air, water, and quality of life, XVIII(a) odor, XX(a) air quality, and XXXIII(a) hydrogen sulfide and ammonia.

CLXXII. Arnetta Frueh

- a. Comment: Those gases such as methane gas, hydrogen sulfide, ammonia, carbon dioxide can cause serious respiratory distress. Other issues are flies, rodents and other inhabitants, and economic boost to community.

Department Response: Please refer to response to comments XVII(d) air, water, and quality of life, XVIII(a) odor, XX(a) air quality, XXXIII(a) hydrogen sulfide and ammonia, and LXXIV(d) flies. Economics is beyond the scope of the proposed permit and outside the Department's authority.

CLXXIII. Judith Von Bank

- a. Comment: My husband and I are very concerned about what the hydrogen sulfate and methane gas will do to our health and quality of life.

Department Response: Please refer to response to comments XVII(d) air, water, and quality of life, XVIII(a) odor, XX(a) air quality, and XXXIII(a) hydrogen sulfide and ammonia. Quality of life is beyond the scope of the proposed permit and outside the Department's authority.

CLXXIV. Tim Frueh

- a. Comment: Submission of new zoning for Howes Township as of February 26, 2016.

Department Response: Please refer to response to comment CV(a) zoning.

CLXXV. Roy Thompson

- a. Comment: There are 10 homes within 2 miles of this proposed operation that will be affected with loss in property value and quality of life.

Department Response: These are beyond the scope of the proposed permit and outside the Department's authority.

CLXXVI. Lee Fischer

- a. Comment: Their nutrient management plan does not have enough acres due to soil type and set-backs. If this proposal is so beneficial and will not harm our quality of life, then why has everything about this project been secretive and back door? Property value loss is also a concern.

Department Response: Please refer to response to comments I(b) setbacks, CV(a) zoning, and VII(a) laws and rules. Quality of life and property value loss is beyond the scope of the proposed permit and outside the Department's authority.

CLXXVII. Tim Frueh

- a. Comment: I have deep concerns of the quality of air, my family and community will have.

Department Response: Please refer to response to comment for XVII(d) air, water, and quality of life, XVIII(a) odor, XX(a) air quality, and XXXIII(a) hydrogen sulfide and ammonia.