SOUND AGRICULTURAL PRACTICE
Opinion Number 10-1

SUBJECT: Request for an Opinion Pursuant to Section 308 of the Agriculture and Markets Law as to the soundness of a certain agricultural practice conducted by John Voelpel

REQUESTOR: Mr. John Voelpel
2770 West Creek Road
Newfane, NY 14108

Preliminary Statement

In a letter to the Commissioner dated November 18, 2009, John H. Voelpel requested an opinion regarding the soundness of an agricultural practice conducted on his property located at 6040 McKee Road in Newfane, New York. Mr. Voelpel requested that the Commissioner issue an Opinion as to the soundness of the grain handling and corn drying conducted on his farm as it relates to air quality. This sound agricultural practice request stems from a verbal complaint filed with the New York State Department of Environmental Conservation ("DEC") by an adjacent non-farm neighbor concerned about the "fugitive" bees' wings or chaff from the grain handling and drying.

The Department conducted a sound agricultural practice review of the grain handling and drying and related storage practices at the Voelpel farm property. The following information and findings have been considered in reaching this Opinion.

Information Considered in Support of the Opinion

1. Mr. Voelpel owns and operates a grain drying and an associated storage facility as part of a 30-acre parcel of land located at 6040 McKee Road in the Town of Newfane. Field corn is harvested and trucked to his McKee Road grain storage facility, where it is unloaded into a wet holding bin using a grain auger. The wet corn is then conveyed to a grain dryer via a second auger and once dried, it is transferred via a third auger to a galvanized grain bin where it is fan cooled and stored until sold. Once the corn is sold, during the winter and spring depending upon market conditions, it is loaded from the storage bin into a grain trailer via an auger for delivery to the purchaser.

2. In his November 18, 2009 letter to Commissioner Hooker, Mr. Voelpel stated that an adjacent neighbor complained about Mr. Voelpel's farm operation and suggested that his property has been impacted by chaff or bees' wings emanating from the adjacent farm operation. Mr. Voelpel's corn dryer is located approximately 700 feet east, southeast of the neighbor's residence.

3. Department Agricultural Resource Specialist Michael Saviola visited the Voelpel farm property on December 15, 2009 with Alan Zylinski, an Environmental Engineer from NYSDEC Region 9 Division of Air Resources, to collect information on the practice. Mr. Voelpel owns and operates a corn and cabbage processing and storage facility in the Town of Newfane, Niagara County. According to Mr. Voelpel, he owns approximately 4,000 acres and rents another 2,000 acres of farmland in the Town of Newfane. Mr. Voelpel indicates that he grows, harvests and processes primarily cabbage, corn and soybeans and that his family has been in business for two generations since 1965. He is what is commonly referred to as a "fresh market grower" whereby he packages and sells 800 to 1,000- 50 lb

"units" of cabbage to chain grocery stores and restaurants. 80% of his field corn is sold to an ethanol plant in Medina, NY and the other 20% is sold to various feed mills for livestock feed.

4. According to the Department's Agricultural District file, the farm is located in Niagara County Agricultural District #4, with an anniversary date of 2/19/08. While District #4 has not yet been reviewed, the District continues as it was originally constituted until either modified or terminated pursuant to AML §303-a (4). Mr. Voelpel indicated that he receives an agricultural assessment annually.

5. Mr. Voelpel indicated that his corn drier has been in operation since November of 2008 and that it was constructed on the McKee Road parcel because there was not adequate space to site such a facility at their "home farm" located at 2770 W. Creek Rd. (approx ½ mile north) where the bulk of the farm's cabbage packaging is conducted. Mr. Voelpel indicates that the corn drier was purposely constructed as far away from the adjacent non-farm neighbor as possible; that he has implemented changes to his grain handling operation to address chaff from grain handling and corn drying; and has immediate plans to upgrade some of the grain handling equipment to reduce chaff . Currently, the grain corn is conveyed to various corn bins and corn drier via a series of PTO driven augers. Mr. Voelpel plans to install a "grain-leg" handling system which is a self-contained system of baskets on a conveyor type system all enclosed in sealed aluminum piping. The grain leg system is powered via a series of electric motors, rather than a tractor PTO under the current auger system. According to industry specifications, the grain-leg handling system is designed to control and/or drastically reduce fugitive chaff or "bees' wings".

6. Mr. Voelpel informed Mr. Saviola that sometime in November of 2009, the neighbor phoned him to complain of the bees' wings, at which time an east wind existed which had occurred for several days. Mr. Voelpel indicates that this was discussed as being the cause of the bees' wings migrating from the corn drying operation in an easterly direction (the prevailing wind direction is normally west to northwesterly).

7. Several days later, the neighbor called the DEC, who dispatched Environmental Conservation Officer (ECO) Roger Thompson to the Voelpel farm. Mr. Voelpel demonstrated the corn drying system to the ECO, who then made several suggestions for corrective action that Mr. Voelpel could quickly and cost effectively implement. The corn drier itself is constructed beneath a roofed pole barn structure. Corrective actions implemented by Mr. Voelpel include placing canvas tarps around each exposed portion of the corn conveyance system to reduce and/or eliminate chaff migration, and installing an extension piece of rubber inner tube on the truck-loading auger. In addition, upon suggestion of the neighbor and the ECO, Mr. Voelpel constructed several wind breaks out of cabbage boxes at various locations where they felt bees' wings were more prevalent. Several days later, DEC Environmental Engineer Alan Zylinski inspected the grain handling facility to verify the practices implemented to reduce fugitive bees' wings. Although DEC did respond to the adjacent landowner complaint, no notices of violation were issued during, or subsequent to Mr. Zylinski's site visit. According to Mr. Zylinski, this was largely due to the farmer's willingness to cooperate in taking corrective action to reduce or eliminate fugitive bees' wings.

8. During the December 15, 2009 site visit, Mr. Saviola did not observe any evidence of airborne or accumulated chaff or bees' wings on or near the adjacent neighbor's property. In addition, during the site visit, Mr. Voelpel indicated that he constructed additional wind breaks out of cabbage boxes at various locations of his grain handling facility as an additional safeguard intended to further limit any potential

airborne chaff or bees' wings emanating from his operation. During the site visit, corn drying and associated grain handling activities were being performed and were observed by Department staff.

9. The Department mailed a letter to five (5) landowners adjacent to the Voelpel property notifying them of the agricultural practice review and inviting them to comment on the practice. The Department received one response from the adjacent neighbor who initiated the verbal complaint to the DEC. The neighbor states that "...a significant amount of corn waste leav[es] the farm property, both on ground and airborne" and that the corn waste, the annoyance and dust poses a health concern for the neighbor and his wife. Mr. Saviola contacted the neighbor to determine if he had any medical documentation specific to any symptoms or effects that may have been caused by the dust and bees' wings from the adjacent farm operation that supports or substantiates his claims. The neighbor responded in a February 8, 2010 e-mail to the Department that he does not have any personal medical documentation specific to the dust or bees wings for him or his wife. He does state that his wife has been treated for allergies and she has been found to be affected by a number of things such as dust, trees, pollen, etc. He also states that he was exposed to asbestos while working for his former employer and that company doctors told employees to avoid any contaminant exposure to the lungs, such as smoking, dust, etc.

10. A copy of a DVD was submitted by the neighbor and reviewed by Department staff. This DVD did not show any evidence of airborne chaff or bees' wings. In addition, Mr. Saviola did not observe any chaff or bees' wings, either airborne or on the ground, on or adjacent to the neighbor's property during his site visit.

11. On December 15, 2009, Mr. Saviola met with the Town of Newfane to determine if Mr. Voelpel had been cited by the Town for any violations of any local laws or ordinances as they pertain to the Voelpel farm property. Mr. Douglas Nankey, Town of Newfane Code Enforcement Officer, indicated that the Town had no records of any violations relative to the Voelpel farm property.

12. On January 19, 2010, Mr. Saviola contacted Mr. David Sage, a Meteorologist with the National Weather Service in Buffalo, NY to obtain local climatological data on wind speed and direction for November 2009. According to the Buffalo (the closest official recording weather station) Climate Summary for the month of November 2009, winds were generally light. The average wind of 6.9 mph was well below the normal of 12.2 mph. According to the report, November also lacked gusty winds with no wind gust exceeding 40 mph. A review of Daily Climate Data for November revealed a total of five (5) days during the month where wind direction was east to east northeasterly (11/11, 11/12, 11/17, 11/22, and 11/24) and recorded wind speeds for those days ranged from a high of 23 mph to a low of 9 mph. According to Mr. Sage, the prevailing winds are primarily out of the west and this isolated trend of easterly winds during November is not a "reoccurrence issue," meaning it typically only occurs once per year, primarily in the fall.

13. On February 2, 2010, Mr. Saviola contacted Professor Bill Cox, Chair of Cornell University's Department of Crop & Soil Sciences, to inquire about standard grain harvesting and storage methods—specifically, what measures can be implemented that can reduce and/or eliminate chaff and bees' wings. Mr. Cox referred Mr. Saviola to Nate Herendeen, retired Area Crops Educator for Cornell Cooperative Extension's North West New York Dairy, Livestock and Field Crops Team. The following information was provided by Mr. Herendeen in a February 2, 2010 letter:

> *"In the handling process, fines can move with the prevailing winds during the process of drying and storage of grain. There is no way to totally prevent the fines during the harvest process. They are attached to the moist kernel and start to separate as the grain is moved to the dryer facilities. There is no way to prevent them ending up in the harvested material. Handling and moving the grain breaks many of them loose and they can become airborne during drying and/or storage. Other broken pieces of corn cob that are about the same size as kernels end up in the harvested grain. These all become part of the lightweight fines as the grain is dried."*
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> *Handling the grain in a commercial system (grain-leg) as compared to outdoor augers may well reduce the amount of fines that move into the ambient environment. That is because the systems usually are inside a structure with less access to the wind. Also, the grain is normally dumped into a catch pit rather than an open boot at the base of an auger. Commercial handling systems are used by most large acreage growers, but open auger systems are also common. The decision to change to a grain leg handling system involves substantial capital investment. It's an individual farm management decision."*

14. Mr. Saviola also contacted Agri-Fab Repair, Inc. (Grain Handling Specialists) in Pavilion, NY and spoke with Joshua DeGroff. Mr. DeGroff stated that the conversion from a conventional auger grain handling system to a grain leg handling system will reduce chaff and bees' wings because it [grain leg] is a more contained system. Mr. DeGroff referred Mr. Saviola to Dick Walthrew at Lakeville Grain Elevator, a division of Perdue Agricultural Commodities Marketing Association (PACMA), a bulk grain and feed ingredients merchandiser located in Livonia, NY. This grain handling facility utilizes state-of-the art grain-leg handling systems. According to Mr. Walthrew, grain leg or elevator systems are enclosed and the grain is distributed through a series of enclosed pipes; therefore airborne "dust" [chaff, bees' wings] is significantly reduced as compared to a conventional auger-driven grain handling system. Mr. Walthrew did make the suggestion of setting up a small wind vane to measure wind speed and direction and perhaps limiting or halting grain handling activities on the days when wind directions are not favorable to down-wind, non-farm neighbors.

15. On February 10, 2010, Mr. Saviola contacted the Niagara County Department of Health, Division of Environmental Health to determine if a complaint had been filed related to the Voelpel farm. Mr. Paul Dickey, Public Health Sanitarian, reviewed his agency's files dating back to 2005 and did not find any record of a complaint being filed or any information pertaining to the Voelpel farm.

16. David Shaw, Director of the DEC's Division of Air Resources, reviewed the draft Opinion for the Voelpel Farm and, in an April 16, 2010 memorandum, recommended that the farmer set up a small wind vane to measure wind speed and direction and perhaps limit or halt grain handling activities on days when wind directions are not favorable to down-wind, non-farm neighbors.

17. Les Cole, Member of the NYS Advisory Council on Agriculture, indicated in a memorandum dated April 21, 2010 that he agreed with the draft Opinion. However, Mr. Cole stated that he disagrees with the suggestion that equipment be installed to measure wind direction and speed for the purpose of limiting handling or drying grain on certain days. Mr. Cole feels that the mitigation efforts to control bees' wings made by Mr. Voelpel are sufficient. Mr. Cole further states that due to the sometimes short window for opportune harvest, restricting Mr. Voelpel's schedule is unreasonable.

18. Agriculture and Markets Law §308(1)(b) requires that the Commissioner consider whether an agricultural practice is conducted by a farm owner or operator as part of his or her participation in the Agricultural Environmental Management (AEM) program as set forth in Agriculture and Markets Law Article 11-A. According to the Niagara County Soil & Water Conservation District (SWCD) Mr. Voelpel participates in the Agricultural Environmental Management program. Specifically, Mr. Voelpel completed AEM Tier I. According to the Niagara County SWCD, the Tier I questionnaire did not identify any significant environmental concerns prompting the need for District staff to conduct a Tier II farm-level assessment.

Findings

Based upon the facts, information and circumstances described above, and in consultation with the Advisory Council on Agriculture; the New York State Department of Environmental Conservation; the New York State College of Agriculture & Life Sciences at Cornell University; the Natural Resources Conservation Service and the Sound Agricultural Practice Guidelines[1] by which agricultural practices are evaluated, I find the following:

1. The Department has found no evidence or received other information indicating that Mr. Voelpel has been cited for any violation of federal, State or local law as a result of his corn drying or grain handling practices.

2. The Department has found no evidence that the corn drying and grain handling has resulted in bodily harm or off-site property damage. Although the adjacent neighbor cited a history of potential exposure to asbestos in his prior employment, and claims that chaff and bees' wings pose a health risk to him and his wife, he did not provide any medical documentation, including any documentation which might show a connection to airborne contaminants emanating from the Voelpel farm operation, to support his claim. Although the potential exists for isolated easterly wind events to occur within the fall harvest season and carry some amount of chaff or bees' wings on to the adjacent non-farm property, the potential for off-site property damage from chaff or bees' wings depositing on the neighbor's property is low due to the corn drier's proximity (located >700 feet away) and the prevailing westerly wind direction. The Department has found no evidence that the corn drying or grain handling presents a significant risk to the air quality of the neighbor's property. While the neighbor did file the initial verbal complaint with the DEC, the neighbor failed to demonstrate a significant air quality risk. None of the other adjacent landowners expressed concerns specific to the Voelpel farm operation.

3. The Department's farm visit revealed that Mr. Voelpel is properly managing his grain handling facility and has future plans for improvements intended to significantly reduce and/or eliminate chaff and bees' wings. Based on the results of the farm visit, Mr. Voelpel's cooperation with DEC and his

[1] On November 1, 1993 the NYS Advisory Council on Agriculture published its report entitled, *Protecting the Right of New York Farmers to Engage in Sound Agricultural Practices*. The Council developed guidelines to assist the Commissioner of the Department of Agriculture & Markets in determining what is sound pursuant to §308 of the Agriculture & Markets Law. The Guidelines state that the practice 1) should be legal; 2) should not cause bodily harm or property damage off the farm; 3) should achieve the results intended in a reasonable and supportable way; and 4) should be necessary. The sound agricultural practices guidelines recommended by the Advisory Council on Agriculture are given specific weight in assessing agricultural practices.

willingness to voluntarily participate in the AEM program, the grain handling and drying practices conducted on the farm do not appear to present a significant air quality concern to non-farm landowners.

4. Mr. Voelpel voluntarily implemented recommendations made by the DEC to address the chaff/bees' wings from his grain handling and corn drying operation. In addition, Mr. Voelpel went beyond the DEC recommendations by placing additional wind breaks at strategic locations near his grain handling facility for the purpose of further reducing fugitive chaff or bees' wings. Significantly, consistent with the recommended actions suggested by Cornell Cooperative Extension staff, and industry experts, Mr. Voelpel intends to purchase and install, at his own expense, an alternate grain handling system designed to significantly reduce and/or eliminate fugitive chaff or bees' wings. Mr. Voelpel indicated that this work will be conducted this summer. Mr. Voelpel has also agreed to make necessary modifications to the loading and unloading areas of his grain handling facility. This includes the installation of a drive-over- type unloading conveyor for off-loading the wet corn and an enclosed truck-loading "boot." These facility modifications, including the grain-leg handling system, are not required in order for the grain handling and storage practices to be considered sound. This is based on the various factors outlined above. However, Mr. Voelpel plans to make the facility upgrades nonetheless to address the neighbor's concerns.

5. The corn drying facility on the Voelpel farm, located >700-feet northeast of the neighbor's property, is only utilized during the fall harvest season. Some grain is periodically loaded into trucks for off-site transport during other times of the year depending on market pricing. The corn drying, handling and loading (for off-site transport) is necessary to Mr. Voelpel's farm operation. It appears that Mr. Voelpel does not allow significant amounts of chaff and bees' wings to accumulate and remain outside of grain bins and grain handling equipment, and he has immediate plans for facility upgrades intended to reduce and/or eliminate fugitive chaff and bees' wings.

Conclusion

Based on the foregoing and in accordance with §308 of the Agriculture and Markets Law, I conclude that, from an air quality perspective, the corn drying and grain handling practices at the Voelpel farm property, as described above, are sound. In reaching this conclusion, the DEC's recommendation to limit or halt grain handling activities on certain days has been taken into account. While adoption of this recommendation by the farmer could improve neighbor relations, it is not necessary for the practice as described to be considered sound. Upon balancing all relevant factors, as described above, issuance of this Opinion is warranted.

6/9/10
Date

Patrick Hooker
Patrick Hooker, Commissioner
Department of Agriculture and Markets