

OHIO DEPARTMENT OF AGRICULTURE
LIVESTOCK ENVIRONMENTAL PERMITTING PROGRAM
FACT SHEET

FOR IMMEDIATE RELEASE

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FACT SHEET : 5C's Farm Inc. Draft Permit to Operate

General overview of the farm

5C's Farm is located in Defiance County, Hicksville Township, 06083 Cicero Road, Hicksville, Ohio. It is owned and operated by William Cleland, Sr. and William Cleland, Jr. The farm is located in the Maumee River Watershed. Menke Consulting, Inc. of Greenville prepared the permit application and the "as-built" engineering plans were prepared by TriCar LTD. of Hilliard.

5C's Farm currently has a design capacity for 3,350 beef cattle in six separate housing buildings. Five of the buildings have a solid manure storage system, with some manure being stored in these housing barns as a pen pack and additional manure storage provided on a stacking area around the silage bunkers. The sixth barn has a liquid manure storage system with slatted floors that allows the manure to be stored in a deep concrete pit below the housing area of this barn. Approximately 70 percent of the cattle and manure are considered to be on a solid system, with the remaining 30 percent of the cattle on a liquid manure storage system. This facility also has a mortality compost pad that is sized to handle normal mortality from the beef operation.

All barns with the exception of Barns 3 have a solid manure storage system and house a total of 2,350 head cattle. The total manure produced by these cattle annually is approximately 1,028,420 cubic feet, which also includes bedding. The barns are able to contain approximately 1-foot of manure, which provides a combined storage volume in the barns of 127,000 cubic feet. The stacking area around the barns and on the silage pad area provides approximately 89,400 cubic feet of storage. The total solid manure storage available at the facility is approximately 216,400 cubic feet or 77 days of storage. In lieu of the required 120 days of manure storage for a fabricated structure by ODA rules, 5C's Farm has a 5-year contractual agreement with Andre Farms to remove solid manure on an average weekly basis for composting at another site.

Barn 3 has a liquid manure storage system and houses a total of 1,000 head of cattle. The total manure produced by these cattle annually is approximately 2,814,964 gallons. Two separate deep pits are constructed under this single barn, with one providing 675,070 gallons and the other providing 639,540 gallons of storage. Combined, the two deep pits provide 1,314,610 gallons of storage, for a storage period of 170 days.

This facility has recently installed a storm water pond to collect and contain all contaminated storm water that is generated at the facility. The drainage area that is contained by this pond is approximately 9.8 acres, which includes the silage bunker areas, manure stacking areas, mortality compost pad, and driveway areas where manure is handled and roof runoff from the barns. The pond has an operating depth of 12.5 feet, which provides a storage volume of approximately 7.5 millions gallons.

Overview of Permit to Operate

5C's Farm draft Permit to Operate is for the entire farm. Under state law, the farm is allowed up to 1,000 beef cattle without requiring a permit from the Ohio Department of Agriculture. The draft Permit to Operate would regulate operations with plans for manure management, insect and rodent control, mortality management, and emergency response. It would be valid for a five-year period, at which time the owner would be required to renew the operating permit.

The manure management plan provided as part of this draft Permit to Operate describes the disposal of all manure generated at this facility. Most all of the solid manure, estimated to be 5,500 tons annually, would be distributed off the farm and taken to a composting facility at another site under a 5-year contract with 5C's Farm. 5C's Farm also has the ability to spread a small amount of this solid manure on neighboring farmland, but no solid manure would be spread on land under the control of 5C's Farm. The manure nutrient analysis for the solid manure is as follows:

Total N per ton of manure = 9 lbs.

Total P 2 O 5 per ton of manure = 4.46 lbs.

Total K 2 O per ton of manure = 5.94 lbs.

All of the liquid manure generated by the facility, estimated to be approximately 3.0 million gallons, would be used as nutrients for crop production at 5C's Farm, which consist of approximately 1,470 acres. A nine-year cropping rotation was used in the plan, which consists of 690 acres of corn silage at an estimated yield of 27.5 tons per acre, 390 acres of corn grain at an estimated yield of 165 bushels per acre, 100 acres of wheat/straw at an estimated yield of 80 bushels per acre, and 290 acres of soybeans at an estimated yield of 50 bushels per acre. The manure nutrient analysis for the liquid manure is as follows:

Total N per 1,000 gallons of manure = 25.10 lbs.

Total P 2 O 5 per 1,000 gallons of manure = 6.86 lbs.

Total K 2 O per 1,000 gallons of manure = 14.89 lbs.

The planned manure application rate for the liquid manure is to be 10,000 gallons per acre on 100 acres of cropland to be planted to corn silage. In addition to the liquid manure generated by the cattle, approximately 4.0 million gallons of storm water will be irrigated annually. This storm water will be irrigated on 125 acres adjacent to the facility that is under a center-pivot irrigation system, at an application rate of 32,160 gallons per acre. Land application of manure would generally take place multiple times each year during the growing season.

An Insect and Rodent Control plan is required as part of the draft Permit to Operate to minimize the presence and negative effects of insects and rodents. 5C's Farm Insect and Rodent Control Plan includes methods and practices to control houseflies, horse flies, stable flies, mice, and rats. Four index cards or "sticky traps" would be located in each barn and monitored on a weekly basis. Baseline data would be established to allow the owner to determine an action level as to when control measures need to be implemented. Rodent bait stations and areas of ponding water are checked on a monthly basis, watering systems are inspected daily for leakage/spillage, feed alleys are "pushed up" daily, and feed storage areas are monitored daily when feeding and unusable feeds are disposed of with the manure. More detail on the Insect and Rodent Control Plan can be found in the draft Permit to Operate.

A Mortality Management Plan is also required for the disposal of dead animals. Approved methods for disposal are burying, burning, rendering, landfilling, or composting. 5C's Farm is currently composting their mortality on a compost pad located adjacent to the storm water pond. William Cleland, Jr. is certified through OSU Extension for mortality composting. All mortality compost would be spread on land owned and/or controlled by 5C's Farm. In the case of a catastrophic mortality event, mortality would be disposed of through a rendering service.

An Emergency Response Plan is the last plan required by the draft Permit to Operate to ensure accidents or emergencies are handled quickly and efficiently to maintain the safety of the environment, wildlife, and water supplies. Any spills would be halted and contained, the proper authorities would be notified, and the area would be cleaned and restored to the original condition. Prearranged emergency equipment and supplies, such as an irrigation pump, bulldozer, backhoe, and vacuum slurry tank are also in place. In case of fire, there is a fire emergency response information sheet to assist farm personnel in contacting local fire protection districts.

Finally, an Operating Record is contained in the draft Permit to Operate that includes all forms and information that must be maintained by the facility to show compliance with ODA's rules. These records include inspection of the manure storage structures, manure characterization, land applications, insect and rodent control, distribution and utilization of manure, and mortality management. These records and the entire facility would be inspected by the ODA at least twice annually.

