

**OHIO DEPARTMENT OF AGRICULTURE  
LIVESTOCK ENVIRONMENTAL PERMITTING PROGRAM  
FACT SHEET**

FOR IMMEDIATE RELEASE

May 2, 2003

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**FACT SHEET: Arts Dairy Draft Permit to Install and Draft Permit to Operate**

***General overview of the farm***

Arts Dairy is located in Van Wert County, Tully Township, 5624 Elm Sugar Road, Convoy, Ohio 45832. It is owned and operated by Henk and Helma Arts. The dairy currently houses 680 dairy cows in two enclosed dairy barns, which is a design capacity of 971 animal units. Arts Dairy is located in the Auglaize River Watershed.

Arts Dairy has been granted a draft Permit to Install (PTI) for one new 750-cow dairy barn and remodel three existing barns to house an additional 570 cows. They have also been granted a draft Permit to Operate (PTO) for the entire farm. Under state law, Arts Dairy is presently allowed up to 700 dairy cows without requiring a permit from the Ohio Department of Agriculture. The addition of 1,320 cows would put the dairy over the permitting threshold. The PTO would be valid for a 5-year period, at which time the owner would be required to renew the operating plan. Compliance Consulting Associates, LLC of Greenville, Ohio, prepared the permit applications and nutrient management plan.

***Overview of Draft Permit to Install***

Upon completion of the proposed expansion, Arts Dairy would be capable of housing 2,000 mature dairy cows, which is equivalent to 2,800 animal units. The annual predicted manure production from the cows is approximately 12.5 million gallons. Wash/wastewater from the parlor would contribute an additional 8.3 million gallons per year. An estimated 2.2 million gallons of wastewater would be collected annually from precipitation that falls directly on the manure storage structures and other areas that would contribute contaminated stormwater. Therefore, the total amount of liquid manure that would be stored annually is approximately 23 million gallon. In addition to liquid waste, bedding, which consists mostly of sand, would contribute 286,300 cubic feet per year, or an estimated 6,200 tons.

Most waste generated at the facility would be flushed into concrete sand separation storage structures on the east side of the facility. Manure wastewater is recycled through the buildings where manure is automatically scraped to flush flume pipes. Sand solids settle out in these multiple concrete storage structures, which can store approximately 239,000 cubic feet of sand. These storage structures provide approximately 348 days of storage for the dairy barns that contribute manure to them. The liquid waste that would be contained in the last cell of the solid system would be pumped to the large manure storage pond located south of the barns. This large manure storage pond has a capacity of approximately 22 million gallons, which provides approximately 344 days of storage.

The remodeled barn that would house 250 cows would have a separate storage system consisting of a sand separation pit and a small manure storage pond. The waste would be

mechanically scraped to the flush flumes and then flushed into the concrete storage structure. This concrete structure is capable of storing approximately 122 days of sand, or 12,000 cubic feet. The liquid waste would overflow this concrete structure and would flow into the small manure storage pond capable of storing 300,000 gallons of waste. Liquid manure from this manure storage pond would be pumped to the large manure storage pond with a portable pump when necessary.

A stormwater pond would also be installed at the facility to collect contaminated stormwater from the silage pads and areas around the commodity (feed) building. This wastewater would be pumped to the large manure storage structure during times when land application is not feasible.

### **Overview of Draft Permit to Operate**

Arts Dairy would utilize approximately 1,410 acres to apply manure and wastewater. The liquid waste stored in the manure storage ponds would be applied via a drag-hose injection system and/or tank wagon and would be custom applied. Application of most of this manure is planned for the months of July through November. The sand/solid manure would be applied by a side-slinger manure spreader by either Arts or by a custom applicator. The solid manure would typically be applied during the months of April through November.

A 9-year cropping rotation was evaluated for the 1,410 acres available for land application. Approximately 810 acres would be planted to corn silage, with an expected yield of 25 tons per acre, accounting for four years in the rotation. Alfalfa would account for an additional four-year rotation, with an expected yield of 6 tons per acre. Eighty acres of wheat would account for one year of the rotation, with an expected yield of 75 bushels per acre.

The estimated manure nutrient analysis for this facility was calculated based on manure samples for a similar facility. Once Arts Dairy is fully expanded and operational, manure samples would be taken from each structure (settled sand and liquid manure), and the manure management plan would be revised accordingly to meet site-specific conditions. The sand/solid manure (14,600 tons per year) nutrient analysis utilized for this operation is as follows:

Available N per ton of manure = 1.29 lbs.

P<sub>2</sub>O<sub>5</sub> per ton of manure = 2.7 lbs.

K<sub>2</sub>O per ton of manure = 4.22 lbs.

The standard annual rate of solid manure would be 40 tons per acre on 212 acres of corn silage and 40 tons per acre on 153 acres of land prior to alfalfa establishment.

The liquid manure nutrient analysis utilized for this operation is as follows:

Available N per ton of manure = 3.1 lbs.

P<sub>2</sub>O<sub>5</sub> per ton of manure = 3.7 lbs.

K<sub>2</sub>O per ton of manure = 12.53 lbs.

The standard annual rate of liquid manure would be 25,400 gallons per acre on 730 acres of corn silage, 24,000 gallons per acre on alfalfa, and 10,000 gallons per acre on wheat. These rates are annual rates chosen for planning purposes and are not recommendations or one-time application rates.