National Pollutant Discharge Elimination System (NPDES) Permit Program

F A C T S H E E T

Regarding an NPDES Permit To Discharge to Waters of the State of Ohio
for **Jo-Jan Holsteins**

Public Notice No.: 11-08-021
Public Notice Date: August 18, 2011
Comment Period Ends: September 18, 2011

OEPA Permit No.: **4IK00034*AD**
Application No.: **OH0142425**

Name and Address of Applicant:

Jo-Jan Holsteins
16646 Nashville Road
Danville, OH 43014

Name and Address of Facility Where Discharge Occurs:

Same Address
Knox County

Receiving Water:
East Branch Little Jelloway Creek

Subsequent Stream Network: **Jelloway Creek**
Kokosing River
Walhonding River
Muskingum River
Ohio River

Introduction

Development of a Fact Sheet for NPDES permits is mandated by Title 40 of the Code of Federal Regulations, Section 124.8 and 124.56. This document fulfills the requirements established in those regulations by providing the information necessary to inform the public of actions proposed by the Ohio Environmental Protection Agency, as well as the methods by which the public can participate in the process of finalizing those actions.

This Fact Sheet is prepared in order to document the technical basis and risk management decisions that are considered in the determination of water quality based NPDES Permit effluent limitations. The technical basis for the Fact Sheet may consist of evaluations of promulgated effluent guidelines, existing effluent quality, instream biological, chemical and physical conditions, and the relative risk of alternative effluent limitations. This Fact Sheet details the discretionary decision-making process empowered to the Director by the Clean Water Act and Ohio Water Pollution Control Law (ORC 6111). Decisions to award variances to Water Quality Standards or promulgated effluent guidelines for economic or technological reasons will also be justified in the Fact Sheet where necessary.

Procedures for Participation in the Formulation of Final Determinations

The draft action shall be issued as a final action unless the Director revises the draft after consideration of the record of a public meeting or written comments, or upon disapproval by the Administrator of the U.S. Environmental Protection Agency.

Within thirty days of the date of the Public Notice, any person may request or petition for a public meeting for presentation of evidence, statements or opinions. The purpose of the public meeting is to obtain additional evidence. Statements concerning the issues raised by the party requesting the meeting are invited. Evidence may be presented by the applicant, the state, and other parties, and following presentation of such evidence other interested persons may present testimony of facts or statements of opinion.

Requests for public meetings shall be in writing and shall state the action of the Director objected to, the questions to be considered, and the reasons the action is contested. Such requests should be addressed to:

Legal Records Section
Ohio Environmental Protection Agency
Lazarus Government Center
P.O. Box 1049
Columbus, Ohio 43216-1049

Interested persons are invited to submit written comments upon the discharge permit. Comments should be submitted in person or by mail no later than 30 days after the date of this Public Notice. Deliver or mail all comments to:

Ohio Environmental Protection Agency
Attention: Division of Surface Water
Permits and Compliance Section
Lazarus Government Center
P.O. Box 1049
Columbus, Ohio 43216-1049

The OEPA permit number and Public Notice numbers should appear on each page of any submitted comments. All comments received no later than 30 days after the date of the Public Notice will be considered.

Citizens may conduct file reviews regarding specific companies or sites. Appointments are necessary to conduct file reviews, because requests to review files have increased dramatically in recent years. For requests to copy more than 250 pages, there is a five-cent charge for each page copied. Payment is required by check or money order, made payable to Treasurer State of Ohio.

Background

The National Pollutant Discharge Elimination System (NPDES), created under the Clean Water Act of 1972, provides a means for monitoring, tracking, and preventing discharges of pollutants to waters of the states. Section 301 of the Clean Water Act and 40 CFR 122.1(b) requires NPDES permits for the discharge of pollutants from any point source into waters of the State. Pursuant to Section 502(14) of the Clean Water Act and 40 CFR 122.2, a Concentrated Animal Feeding Operation (CAFO) is listed in the definition of a point source. A discharge can be considered any addition of any pollutant or combination of pollutants to water of the United States. This includes runoff from feedlots, stock piled manure, silage bunkers, overflow from storage ponds, overflow from animal watering systems, and runoff from fields on which manure is not applied in accordance with proper agricultural practices.

Waters of the United States not only include rivers, streams, intermittent streams and lakes, but also irrigation ditches, laterals, canals, etc. which eventually flow into rivers, streams, and lakes.

Other federal regulations require concentrated animal feeding operations to acquire an NPDES permit. These include, but are not limited to the following:

- 40 CFR 122.3: Establishes concentrated animal feeding operations as "point sources subject to the NPDES permit program".

- 40 CFR 122.21: States that all CAFOs which discharge have a duty to seek coverage under an NPDES permit.

- 40 CFR 122.23: Details the fact that CAFOs are point sources that require NPDES permits for discharges. Once an operation is defined as a CAFO, the NPDES requirements for CAFOs apply to all animals in confinement at the operation and all manure, litter and process wastewater generated by those animals or the production of those animals, regardless of the type of animal.

Based on 40 CFR 122.23, Jo-Jan Holsteins meets the definition of a medium CAFO and is required to obtain coverage under an NPDES permit. Jo-Jan Holsteins will be permitted to confine 300 mature dairy cattle and 250 young stock and heifers. Jo-Jan Holsteins had production area discharge of manure to waters of the State. This discharge did not occur as a result of a 25-year, 24-hour storm event.

This permit does not allow a discharge of manure except under extreme circumstances as specified in Part I, A of the permit. An extreme weather related discharge is defined as an overflow due to a 25-year, 24-hour (or greater) storm event or a chronic rainfall that is deemed excessive by the Ohio EPA. In the event of a severe storm and a discharge occurs, Ohio Water Quality Standards may not be violated by any discharge from the production area.

There are several pollutants associated with discharges from CAFOs, including: nutrients (particularly nitrogen and phosphorus), organic matter, solids, pathogens, and odorous/volatile compounds. Additional pollutants also include salts and trace elements and to a lesser degree antibiotics, pesticides, and hormones. These pollutants can enter the environment through a number of pathways, including: surface runoff and erosion, overflows from lagoons, spills and other dry-weather discharges, leaching into soil and groundwater, and volatilization of compounds and subsequent redeposition to the landscape. These discharges of pollutants can originate from animal confinement areas, manure handling and containment systems, manure stockpiles, and cropland where manure is applied. However, the NPDES permit will generally prohibit discharge of these to waters of the State.

Location of CAFO/Receiving Water Use Classification

Jo-Jan Holsteins is located on Nashville Road near Danville, Ohio in Jefferson Township, Knox County. The nearest stream to the Jo-Jan Holsteins facility is East Branch Little Jelloway Creek. The subsequent stream network includes Kokosing River, Walhonding River, Muskingum River, and ultimately the Ohio River. The Jo-Jan Holsteins facility is in the Erie Drift Plains Ecoregion. Figure 1 shows the approximate location of the facility and the surrounding area.

East Branch Little Jelloway Creek has been designated under Ohio Water Quality Standards (OAC 3745-1-24) for the following use designations: Exceptional Warmwater Habitat, Coldwater Habitat, Agricultural Water Supply, Industrial Water Supply, and Primary Contact Recreation.

Facility Description

Jo-Jan Holsteins is a medium Concentrated Animal Feeding Operation that is permitted to confine 300 mature dairy cattle and 250 young stock and heifers. The manure is handled as a liquid and is stored in one manure storage pond and also within under-barn pits. These structures provide for approximately 1.6 million gallons of combined storage. With approximately 4.7 million gallons of manure expected to be produced annually, the existing manure storage structures provide for 120 days of liquid storage. A composting pad is planned to be installed at the facility. The storage ponds are designed to handle the direct precipitation and runoff from the 25-year, 24-hour storm event.

Description of Land Application Procedures

Jo-Jan Holsteins currently has a current Comprehensive Nutrient Management Plan developed through the Knox County Soil and Water Conservation District. At Jo-Jan Holsteins, the liquid manure is removed from the storage structures and land applied on surrounding cropland. The CNMP for the facility lists approximately 850 acres available for land application of manure. Manure is generally surface applied by a tanker or box spreader with no incorporation. Crops grown include corn, soybeans, wheat, alfalfa hay, and rye.

The Manure Management Plan is available by contacting Ohio EPA. Please note that a portion of the Manure Management Plan conditions become effective upon permit coverage, such as monitoring and inspection requirements, setbacks, timing restrictions, etc. See Section "Additional Effluent Limitations and Monitoring Requirements" below. As stated in Part II, J, Ohio EPA can notify Jo-Jan Holsteins at any time that the plan does not meet the minimum requirements of the permit and request plan modifications, which are required to be completed within 30 days of notification. It should be noted that comments regarding manure management plan requirements contained in the permit conditions should be made during this public notice period of the draft permit.

Receiving Water Quality / Environmental Hazard Assessment

Ohio EPA conducted a Biological and Water Quality Study of the Kokosing River and Selected Tributaries in 2007. The following are excerpts from the report:

"Pollution Issues
Impairments to the aquatic community in the Kokosing River watershed were associated with livestock and agriculture, municipal discharges, hypolimnetic lake discharges (Apple Valley Lake), and urban runoff (Table 2, pg. 10). Aquatic communities in three locations impaired by agricultural land uses are

the following: Kokosing River RM 50.5, East Branch Jelloway Creek RM 3.3, and South Branch Kokosing River RM 2.9. Livestock operations impaired Kokosing River (RM 39.3), East Branch Jelloway Creek (RM 3.3), and North Branch Kokosing River (RM 4.0)."

"Though agriculture is the dominant land use in the watershed, residential land use is an increasingly significant element of the landscape in unincorporated areas of the watershed's counties. Use of land for residences, rather than agriculture, increased substantially in recent years."

"*East Branch Jelloway Creek*
Macroinvertebrate ICI scores in the East Branch Jelloway Creek have not met the EWH biocriterion at any earlier sampling period. The ICI score was 32 (marginally good) in 1998 at RM 3.4, and a low fair ICI score of 14 was tabulated in 2002 at RM 3.1. The very good or marginally exceptional score of 44 did show a marked improvement despite the destabilized banks and flashy flows."

"The three aquatic communities impaired by agricultural land uses are the following: Kokosing River (RM 50.5), East Branch Jelloway Creek (RM 3.3), and South Branch Kokosing River (RM 2.9). Livestock operations impaired aquatic communities at Kokosing River (RM 39.3), East Branch Jelloway Creek (RM 3.3), and North Branch Kokosing River (RM 4.0)."

Additional Effluent Limitations and Monitoring Requirements

Effluent limitations and monitoring requirements contained in Parts II and VII of the permit are based on 40 CFR Parts 122, 123, 412, OAC Chapters 901:10-2, United States Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) Practice Standards, and best professional judgment.

The NPDES permit requires the development of a Manure Management Plan. The Manure Management Plan shall address the form, source, amount, timing, agronomic rate, and method of application of nutrients to each field to achieve compliance with Part I, A of the permit, assure appropriate agricultural utilization of the nutrients, and minimize movement of pollutants to surface waters.

The NPDES permit requires the submission of an annual report to Ohio EPA in Part II that shall include at a minimum the following information:

1. The number and type of animals confined in the previous year.
2. Estimated amount of manure generated in the previous year in gallons or tons.
3. Total amount of manure removed from the facility for land application and/or distribution or utilization in gallons or tons.
4. Total number of acres for land application covered by MMP.
5. Total number of acres under the control of the permittee that were used for land application in the previous year.
6. Manure distribution and utilization records.
7. Summary of the number of discharges from the production area and the number of discharges from land application areas that were not composed of agricultural storm water runoff for the past year, including date, time and approximate volumes.
8. Information on any non-compliance not previously reported to Ohio EPA. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

9. A statement indicating if the MMP was developed by a certified manure management planner.
10. A copy of the training/seminar attendance documentation as required by Part II, G of this permit.
11. The actual crop(s) planted and actual yield(s) for each field, the actual nitrogen and phosphorus content of the manure, the results of calculations conducted in accordance with Part II, J, 4, and the amount of manure applied to each field during the previous twelve months.

The NPDES permit includes manure land application requirements in Part VII. These requirements include the development of a total nutrient budget for the operation, determination methods for appropriate manure application rates, record keeping requirements, application restrictions, and application timing restrictions.

The NPDES permit requires specific monitoring and inspection requirements. The following table from Part VII of the permit contains the requirements along with the justification for inclusion of the requirements in the permit.

Table 1. Monitoring and Inspection Requirements

Action	Frequency	Record Keeping Requirements	Justification
Grab samples shall be taken of all discharges from the production area. Clean storm water that has been diverted does not need to be sampled.	Each time they occur	Date and time of sample, results of analysis, and the information required in Part III, 5 and 6.	Best Professional Judgment – To ensure compliance with Part I, A of the permit.
All discharges from the production area and land application area shall be recorded in the operating record.	Each time they occur	Cause, volume, and duration of discharge and any corrective actions needed and the dates those actions were taken.	40 CFR Part 122.42 and 40 CFR Part 412.37 requires these records to be maintained.
Grab samples shall be taken of discharges from land application areas where manure was applied on frozen and/or snow covered ground.	Each time they occur	Date and time of sample, results of analysis, and the information required in Part III, 5 and 6.	Best Professional Judgment – To ensure compliance with Part I, A and Part VII of the permit.
Representative samples of the manure to be land applied shall be taken from each source (e.g. each lagoon, storage tank, or permanent stockpile area must be sampled).	1/year	The information required in Part III, 5 and 6 and Part VII.	40 CFR Part 412.4 and 40 CFR Part 412.37 requires the sampling and records to be maintained.
Representative soil samples of the manure land application fields.	Every 3 years	The information required in Part III, 5 and 6 and Part VII.	40 CFR Part 412.4 and 40 CFR Part 412.37 requires the sampling and records to be maintained.
Monitor operating level of all manure storage or treatment facilities.	1/week	Date and time of observation, manure level in each structure.	40 CFR Part 412.37 requires the inspections and record keeping.
Inspect manure storage or treatment facilities, including devices channeling contaminated storm water to the manure storage or treatment facility for evidence of erosion, leakage, animal damage or discharge.	1/week	Date and time of inspection, structural integrity, vegetation condition, and any corrective actions needed and the dates those actions were taken.	40 CFR Part 412.37 and Best Professional Judgment require the inspections and record keeping.
Inspect storm water diversion devices or runoff diversion structures.	1/week	Date and time of inspection, observations of flow quantity and color, structural integrity (e.g. signs of cracks, sparse or stressed vegetation, erosion, etc.), any corrective actions needed and the dates those actions were taken.	40 CFR Part 412.37 and Best Professional Judgment require the inspections and record keeping.
Inspect drinking and cooling water lines that are located above ground, readily visible or accessible for daily inspection.	Daily	Date and time of inspection, number of leaks, any corrective actions needed and the dates those actions were taken.	40 CFR Part 412.37 requires the inspections and record keeping.
Monitor forecast at the CAFO location.	Every land application event	Date, weather conditions (including percentage chance of rain) 24 hours prior to application, at the time of application, and 24 hours after application.	40 CFR Part 412.37 and Best Professional Judgment require the monitoring and record keeping.
Inspect land application fields.	In accordance with MMP	Date and signs of discharge or runoff into surface waters and/or conduits to surface waters of the State.	Best Professional Judgment requires the monitoring and record keeping to document compliance with 40 CFR Part 412.4.
Inspect land application equipment.	In accordance with MMP	List of equipment, date of inspections, corrective actions, calibration dates.	40 CFR Part 412.4 and Best Professional Judgment require the inspections and record keeping.

Figure 1. Location of Jo Jan Holsteins