DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

B703846989

FACILITY: Continental Dairy Facilities, LLC		**SRN / ID:** B7038
LOCATION: 999 WEST RANDALL STREET, COOPERSVILLE		**DISTRICT:** Grand Rapids
CITY: COOPERSVILLE		**COUNTY:** OTTAWA
CONTACT: Derrick Scheidel , EH&S Supervisor		**ACTIVITY DATE:** 10/22/2018
STAFF: Tyler Salamasick	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: FY 2019 Opt out inspection		
RESOLVED COMPLAINTS:		

Clean Air Act Inspection report for Continental Dairy Facilities, LLC (Continental), Coopersville, Michigan

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Facility Background

Continental Dairy Facilities, LLC is a manufacturer of dairy products. The facility is comprised of two companies, fairlife and Continental Dairy which share a campus and state registration number. The two companies are considered one source and have shared facility wide emission limits as defined by PTI 101-09B. The facility is not subject to the Title V program, which is discussed below, in the regulatory analysis section of this report.

Compliance History

The facility has not received any violation notices from the AQD in the past five years. The facility was last inspected in Fiscal Year 2015 and was found to be in compliance with the applicable air quality rules and regulations at that time.

Location

Continental Dairy Facilities, LLC is located at 999 West Randall Street, Coopersville, Michigan. This area is a mixed residential, rural and commercial area. The nearest residential structure is approximately 1300 feet to the northeast of the facility.

Introduction and purpose of inspection

On October 22, 2018 Tyler Salamasick, Environmental Quality Analyst of the Michigan Department of Environmental Quality, Air Quality Division conducted an unannounced, scheduled inspection of Continental Dairy Facilities, LLC. The MDEQ inspected the facility located at 999 West Randall, Coopersville, Michigan.

The purpose of the inspection was to determine the facility's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Air Pollution Control Rules; PTI No. 88-14A and PTI No. 101-09B.

Observations and facility processes

Prior to entering the site, AQD staff made observations near the facility. AQD staff observed normal ambient odors as well as some faint odors consistent with agricultural activities. While on site I observed a faint vinegar like odor. The vinegar odor was faint and fleeting.

AQD staff met with Derrick Sheidal, EHS Manager for Continental Dairy and presented their identification. AQD staff informed the representative of the intent of the inspection. The facility

representative agreed to show the AQD the facility and its processes. Continental Dairy Facilities, LLC uses two main boilers to process milk and produce an evaporated product. Continental supplies milk directly to fairlife. Fairlife further processes the milk to produce filtered milk and flavored filtered milk. AQD staff first observed the Continental Dairy process and then met with Todd Coone, EHS Manager for fairlife to observe the fairlife process.

During the inspection AQD staff observed the facility's processes which are as follows:
Raw milk is unloaded from trucks in a designated receiving area. The milk is tested and then pumped to a storage silo. The milk can then be separated into skim and cream. Continental has the ability to process the cream into a butter but doesn't currently operate the process. The separated skim is then sent to the evaporator. The evaporator concentrates the skim prior to processing in the spray dryer. The spray dryer process involves passing warm air past the milk droplets which in turn drives moisture off of the product. This moisture is then emitted out of the top of the building through an emission stack. The powder is then further dried and sent to the powder bin. The powder is paged into either 50lb bags or 3,000lb totes and shipped to customers.

While inspecting the process we went to the top of the facility and observed the area around the top of the stack. During past inspections this area had signs of fallout associated with the process. During my inspection this area was clean and free of foreign debris.

After observing the Continental Dairy side of the process, I met with Todd Coone and inspected the fairlife process. The process starts with receiving milk from Continental Dairy. Fairlife forms plastic bottles starting with molded preforms. The preforms are small vial shaped plastic pieces which are used in the blow molding process to form full sized plastic bottles.

Once the bottles are blown to shape they are conveyed to the bottle sanitizing line. The sanitizing line uses warm water and a sanitizing spray to clean the bottles. The sanitizer is composed of peroxyacetic acid and hydrogen peroxide. Some of the acid is emitted and is controlled by wet scrubbers. The permit requires that the scrubber pressure drop is monitored on a weekly basis. I asked Todd to show me where the pressure drop was monitored, but it we could not find a gauge. Todd later provided me with an example of the monitoring data.

After the bottles are cleaned they are filled and labeled. The facility labels the bottles with pre-printed plastic. There did not appear to be any significant emissions from the bottling or the labeling. Once bottled and labeled the milk is packed and made ready for shipping.

Todd also showed me the areas where the milk is processed and blended. The processing of the milk separates out the fats, sugars and proteins. This process is done wet through a series of filters. I did not observe any points which appeared to dry any components to a powder which could be a source of air contaminants. The facility does however have a dry blending area, where different dry flavorings are blended and added to the milk. The dry blending emissions were vented through a fabric filter and back into the plant.

Regulatory analysis and compliance evaluation
Facility emission category

Continental Dairy Facilities, LLC would be a major source but has taken opt out limits for nitrogen oxides (NOx), greenhouse gases (CO2e), particulate (PM), particulate under 2.5 microns (PM 2.5) and

particulate under 10 microns (PM 10). PTI No. 101-09B establishes the facility wide (FG-Facility) limits for the air contaminants listed above.

Federal Regulations
The facility has two NSPS Dc subject boilers at 46 MMBtu. The facility had in the past provided notice of the boilers and indicated that they comply with the NSPS through the usage of pipeline quality natural gas.

PTI-101-09B
Issued to Continental Dairy (includes facility wide limits which also pertain to fairlife)
Emission units EU-DRYER, EU-TRANSPORT, EU-STORAGE&FILL and Flexible Group FGFACILITY.

EU-DRYER- A milk dryer used to convert liquid concentrate to a milk powder. A direct natural gas-fired heater is associated with the dryer. The heater is exhausted through the same exhaust stack as the dryer. A cleaning process associated with the milk dryer is also conducted using sodium hydroxide, nitric acid and water. The associated emissions from the cleaning process are exhausted through two separate stacks from the milk drying process itself.

Emission limits – EUDRYER Baghouses
The dryer's two baghouses are limited to 0.01867 lbs of PM per hour per 1000 pounds of exhaust gas and 6.048 pounds per hour of PM10. The facility demonstrates compliance with this emission limits through the implementation of a Malfunction Abatement Plan (MAP) in combination with pressure drop monitoring. The facility may also be required to conduct periodic testing if needed. If complying with the permit, the dryer is at most a 26.49 tpy source of PM10. During the inspection I reviewed the MAP and it appeared that the baghouses generally operated in MAP. I observed the pressure drops of the baghouses which were operating at that time. The normal expected range for the baghouses is 2.4 and 3.6" water. Baghouse 1 was operating at 2.14" water and baghouse 2 was operating at 3.36" water. I indicated that baghouse 1 had a slightly low reading for what was expected. Derrick had previously indicated that they had changed baghouse bag filter types and it is possible that theses bags operate at a lower pressure. I informed Derrick that he should look into this and update the MAP if necessary. It also appeared that the filter change has helped address the previous inspectors concerns regarding large fallout debris on the roof.

EU-TRANSPORT- A series of air transport pipes used to transport powder to storage and filling operations.

Emission limits – EU-TRANSPORT
The transport system is limited to 0.01867 lbs of PM per hour per 1000 pounds of exhaust gas and 0.09 pounds per hour of PM10. The facility demonstrates compliance with this emission limits through the implementation of a Malfunction Abatement Plan (MAP) in combination with pressure drop monitoring. If complying with the permit, EU-TRANSPORT is at most a 0.39 tpy source of PM10. While inspecting the equipment I observed that the pressure drop was reading at 0.0" inches water. The MAP indicated that the expected range is between 0.08 and 0.36 inches water. The control devices gauge appeared that it may be too large to read within this range. This may need be to be addressed if they device cannot detect a pressure drop on the equipment.

EU-STORAGE&FILL- A storage and filling operation for dry milk powder.

Emission limits – EU-STORAGE&FILL
The transport system is limited to 0.01867 lbs of PM per hour per 1000 pounds of exhaust gas and 0.11 pounds per hour of PM10. The facility demonstrates compliance with this emission limits through the implementation of a Malfunction Abatement Plan (MAP) in combination with pressure drop monitoring. If complying with the permit, EU-STORAGE&FILL is at most a 0.48 tpy source of PM10. While inspecting the equipment I observed that the pressure drop was reading at 1.7 inches water. The MAP indicates that the normal pressure drop is between 2.0 and 3.0 inches water. The permit requires that the facility monitor the pressure drop on a continuous basis and record the pressure drop daily. Derrick indicated that they switched from daily records to an alarm-based system. I informed that in order to comply with the permit they should be recording the readings or modify the permit to reflect the changes.

Flexible Group – FGFACILITY
This includes all process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.
Emission limits –Source wide
The facility is limited to 75.7 tons per year (tpy) of nitrogen oxides (NOx) per 12 month rolling time period. The facility emitted 18.62 tons per year of NOx per 12 month rolling time period for the month of September 2018. This appears to be the highest emission rate for the past 2 years and complies with the permit limit.

The facility is limited to 89,965 tpy of CO2e. The facility's highest reported emissions were 9159 tons of CO2e during the month of September 2018. This is below the permitted limit and appears to comply with the permit.

The facility is limited to 29.1 tpy of PM. The facility's highest emission was 7.59 tpy of PM during the month of July 2016. This is below the permitted limit and appears to comply with the permit limits.

The facility is limited to 33.3 tpy of PM10 and 33.3 tpy of PM2.5. The facility's highest emission was 9.34 tpy of PM10/PM2.5 during the month of August 2008. This is below the permitted limit and appears to comply with the permit limits.

Material limits
The facility is limited to a natural gas usage that shall not exceed 1,492 MMscf per year based on a 12-month rolling time period as determined at the end of each calendar month. The facility's highest usage was 735.57 MMscf per 12 month rolling time period. This is approximately 49% of the facility's limit and appears to comply with the material restrictions.

The facility is also limited to a fuel oil usage for FGFACILITY that shall not exceed 20,550 gallons per year based on a 12-month rolling time period as determined at the end of each calendar month. The facility's highest yearly usage was 52 gallons. This is below the 20,550-gallon limit.

PTI-88-14A
Issued to fairlife, LLC

Emission units EUDIB1, EUDIB2, EUDIB3, EUDIB4, EUDIB5, EUSANITIZE1, EUSANITIZE2 and EUSANITIZE3.
Flexible Groups FGDIB, FGSANITIZE and FGFACILITY (covered in PTI 101-09B)

Flexible group - FGDIB
This includes five dry ingredients blending (DIB) processes. Emissions are vented to the in-plant environment. The emission units include EUDIB1, EUDIB2, EUDIB3, EUDIB4 and EUDIB5.

This process does not have emission limits or material limits. The permit requires that the equipment is not exhausted to the ambient air at any time. The permit also requires that the facility follow a malfunction abatement plan (MAP). During the inspection I did not observe any external emission points on the equipment.

Flexible group – FGSANITIZE
This includes three bottle sanitizing lines with their associated wet scrubber air pollution control devices. The emission units include EUSANITIZE1, EUSANITIZE2 and EUSANITIZE3.

The permit does not have emission limits or material limits. PTI 88-14A requires that each of the sanitizing lines are equipped with wet scrubber systems. The wet scrubbers are designed to control acid gases from the sanitizer by contacting the peroxyacetic acid and hydrogen peroxide mixture with an alkaline solution. This is intended to neutralize the exhaust gases before they are emitted to the ambient air. The pressure drop across the liquid is monitored to demonstrate that the equipment is operating properly and that scrubber clogging, or channeling is not occurring.

The permit requires that the facility follow their MAP as well as monitor the pressure drop across the wet scrubber. The MAP does not indicate what the acceptable operating range is. During the past inspection it was recommended that the facility update and resubmit their MAP by May 1, 2015. The MDEQ AQD does not currently have an updated MAP from after that inspection. It is recommended that the facility update the MAP and resubmit a copy or they may be in violation of FGSANITIZE Special condition III.1b. Todd provided a sample copy of the pressure drop recordings which appear to be recorded ever 60 seconds. The facility is required by the permit to maintain a weekly record of the pressure drop. The facility should modify their records to better reflect the requirements of the permit and clearly label which parameters are being monitored for each scrubber.

Discussion

Compliance Assistance/ Concerns: It is recommended that both fairlife and Continental Dairy update their malfunction abatement plans to include the most current and relevant pressure drop operating parameters. The wet scrubbers must have an appropriate operating range. Continental Dairy should either update the permit to reflect the changes to EU-STORAGE&FILL or continue recording pressure drops on a daily basis.

Compliance statement: It appears that Continental Dairy Facilities, LLC is in compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Air Pollution Control Rules; and PTIs 101-09B and 88-14A.

NAME _____ DATE 11/19/2018 SUPERVISOR _____