

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection**

N249963782

FACILITY: HUDSONVILLE CREAMERY		SRN / ID: N2499
LOCATION: 345 E. 48TH ST., HOLLAND		DISTRICT: Kalamazoo
CITY: HOLLAND		COUNTY: ALLEGAN
CONTACT: Dan DeJonge , Engineering & Facilities		ACTIVITY DATE: 05/25/2022
STAFF: Cody Yazzie	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS:
SUBJECT: Scheduled On-Site Inspection		
RESOLVED COMPLAINTS:		

On May 25, 2022 Air Quality Division (AQD) staff (Cody Yazzie) arrived at 345 East 48th Street, Holland Michigan at 9:00 AM to conduct an air quality inspection of Hudsonville Creamery (hereafter HC) SRN (N2499). This inspection was conducted along side a scheduled Environmental Protection Agency (EPA) regarding the Clean Air Act (CAA) 112r Regulation. The State of Michigan Air Quality Division does not have regulatory authority over the CAA 112r regulation. The inspection and records request by AQD Staff were to evaluate compliance with the requirements of the CAA; 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. Staff made initial contact with the office receptionist and stated the purpose of the visit. Dan DeJonge, HC, Engineering & Facilities, operated as the point of contact and arrived shortly thereafter and took staff to a conference room for further discussions. Once at the conference room Staff was joined by Courtney Miller, HC, PSM Coordinator and Mike Hart, HC, Facility Manager.

HC is an ice cream manufacturing facility that manufactures packaged ice cream and has started recently manufacturing ice cream novelties such as bars and sticks. The facility takes in raw ingredients which are mixed and blended before the homogenization and pasteurization processes. Then sent to aging, storage, and a Continuous Freezer/Batch Freeze/Whipping before it is finally packaged and hardened. The facility had 235 staff members at the time of the inspection. It was indicated that the facility operates 3 shifts. Manufacturing occurs on 1st and 3rd shift. Sanitation occurs on 2nd shift. HC has never been inspected by the AQD.

Mr. DeJonge guided Staff around the facility and provided records requested by Staff. Required personal protective equipment are a hard hat, safety glasses, and steel toe boots. Staff observations and review of records provided during and following the inspection are summarized below:

Refrigeration Equipment:

Currently the facility has two refrigeration equipment systems. These refrigeration systems use anhydrous ammonia as the refrigerant. All equipment that handle the anhydrous ammonia and that are associated with the refrigerant systems are referred to by the facility as being associated with Engine Room 1 and Engine Room 2.

When the building was originally constructed in 2004 the facility was constructed with Engine Room 1 which was for both manufacturing and cold storage. At the time of original construction, the system had a capacity of 18,000 lbs of anhydrous ammonia. Prior to December 2016 the AQD had no limitation on the capacity of refrigeration equipment/cold storage equipment that used anhydrous ammonia.

In 2021 and 2022 the facility added Engine Room 2 and upgraded the capacity of the anhydrous ammonia associated with Engine Room 1. In May 2021 the cold storage warehouse (Engine Room 2) opened with a anhydrous ammonia capacity of 21,600 lbs or around 3,795 gallons of anhydrous ammonia. Engine Room 2 is used for the specific purposes of cold storage. With the addition of Engine Room 2 the original engine room (Engine Room 1) was converted to provide refrigeration for manufacturing only and had its capacity of anhydrous ammonia increased to 23,609 lbs. The installation of Engine Room 2 occurred after the Rule 280(2)(a) rule change in December 2016. This would make Engine Room 2 subject to the new language under the Rule 280(2)(a) exemption. This exemption limits cold storage refrigeration equipment using anhydrous ammonia to equipment to a storage capacity of less than 500 gallons if operating under Rule 280(2)(a). From the information provided by HC Engine Room 2 has a total storage capacity of 27,624 lbs or 4,854 gallons of anhydrous ammonia. This is above the 500-gallon limit outlined in exemption Rule 280(2)(a). Based on this it would appear that this is a violation of Rule 201 and Engine Room 2 would need to be apply for a Permit-to-Install (PTI) to operate.

Engine Room 1 may have met the exemption requirements prior to the December 2016 rule change as there was no anhydrous ammonia limit. Once Engine Room 1 underwent the modification that expanded the capacity of the system it became subject to the new language under Rule 280(2)(a) that limits the cold storage equipment using anhydrous ammonia with a storage capacity of less than 500 gallons. The addition done in 2021 increased capacity by 5,609 lbs or 985 gallons. This increase leaves Engine Room 1 at a total capacity of 23,609 lbs or 4,148 gallons. This is above the 500-gallon limit outlined in exemption Rule 280(2)(a). Based on this it would appear that this is a violation of Rule 201 and Engine Room 1 would need to be apply for a Permit-to-Install (PTI) to operate.

Boilers:

The facility has two natural gas boilers that operate at the facility. These boilers are used to produce steam for the pasteurization process in the manufacturing process. These two boilers are 250 HP or 8,369 BTU/hr boilers. The two boilers are both Dean Boiler and are Model: CBEX-2W 700-250-150ST. These boilers appear to meet the requirements to be exempt under Rule 282(2)(b)(i).

Labeling:

The facility has 13 Keyence brand ink jet date coders. The facility had usage records that showed during 2021 the facility used 100 liters of ink and 120 liters of solvent. The facility provided the MSDS for the ink and solvent used. Review of the MSDS showed that the Solvent is composed of Methyl Ethyl Ketone (MEK) and Acetone. The 120 liters of solvent usage is 212.48 lbs of VOC emissions. The MEK is 191.73 lbs and 20.76 lbs of acetone emissions for 2021. These are based on the MSDS compositions of MEK and Acetone and solvent usage. The ink is composed of MEK and Toluene for VOC's. The 100 liters of ink usage calculates to 160.73 lbs of VOC emissions. The MEK is 159.77 lbs of the ink VOC emissions, while the Toluene is 0.95 lbs of the VOC emissions. The total amount of VOC emissions combined are calculated to be 373.21 lbs of VOC emissions from the ink jet date coders for 2021. It appears that under Rule 290 the facility would be allowed to emit 1000 lbs per month total combined.

For 2022 the facility has purchased 48 liters of ink and 100 liters of solvent. The facility did mention that these were purchased records so there were a good amount of solvent left in the unused and would not need to order solvent for a few months. At the time of the inspection the total combined VOC emissions for the ink and solvent usage calculated to be 254.22 lbs of VOC emissions.

The labeling operations appear to be exempt under rule 290 as the year emissions from the well under what the facility is allowed under the monthly emissions under rule 290.

At the time of the inspection and based on a review of records obtained during or following the inspection, the facility appears to be in non-compliance with Rule 201 for the Engine Room 1 and Engine Room 2 having cold storage refrigeration equipment using anhydrous ammonia having a storage capacity greater than 500 gallons. Staff stated to Mr. DeJonge that a report of the inspection would be sent to the facility for their records. Staff concluded the inspection at 5:00 PM.-CJY

NAME Cody Yuzji

DATE 7/28/22

SUPERVISOR Rik 8/8/22