

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

B724464529

FACILITY: JBS Plainwell, Inc.		SRN / ID: B7244
LOCATION: 11 11th Street, PLAINWELL		DISTRICT: Kalamazoo
CITY: PLAINWELL		COUNTY: ALLEGAN
CONTACT: Abe Anderson , Environmental Manager		ACTIVITY DATE: 04/21/2022
STAFF: Cody Yazzie	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On April 21, 2022 Air Quality Division (AQD) staff (Cody Yazzie) arrived at 11 11th Street, Plainwell Michigan at 10:45 AM to conduct an unannounced air quality inspection of JBS Plainwell (hereafter JBS) SRN (B7244). Staff made initial contact with security at the front entrance and stated the purpose of the visit. Abe Anderson, JBS, Environmental Manager, is the environmental contact and arrived shortly thereafter and took staff around the facility to conduct the inspection.

This facility is a meat processing and packaging facility. JBS only processes cattle to produce shelf ready ground beef and various cuts of meat that are sent to a warehouse for further processing. JBS has around 1,200 staff members at the facility. The facility operates two shifts, a manufacturing shift from 6 AM – 5 PM and a sanitation shift during the night.

The facility has a barn where the cattle is stored before they are harvest. After the harvest they are stored in a refrigeration room for 24-hours before they begin the cleaning process. After the cleaning and deboning takes place. The meat is transported to the trimming and fabrication area. In this area the facility will produce the different cuts of meat. Meat that cut to a specification is then sent to packaging. While meat that is used to produce ground beef is sent to a grinder before packaging.

The facility also has an area that is used to process hide. The hide is cleaned further while undergoing a dehydration process. For the dehydration process the hide is soaked in salt water and stretched. The facility stores the salt for this operation outside under a structure with only one open face, so it can be loaded and unloaded.

JBS was last inspected by the AQD on August 1, 2018 and appeared to be in Compliance at that time with PTI No. 71-03C. Staff asked, and Mr. Anderson stated that the facility does not have any emergency generators or cold cleaners.

Mr. Anderson gave staff a tour of the facility. Required personal protective equipment are a hard hat, steel toe boots, ear plugs, and safety glasses. Staff observations and review of records provided during and following the inspection are summarized below:

FGBOILERS&FLARE:

This flexible group includes EUCLEBOILER1, EUCLBOILER2, and EUFLARE. During the most recent PTI modification EUHURSTBOILER was removed from the PTI as it was decommissioned on January 27, 2022. This This flexible group is also subject to 40 CFR Part 60 Subparts A & Dc.

The flexible group also is required to track the NOx and SO2 emissions. Since the facility is no longer burning fuel oil the SO2 emissions are well below their permit limit. The largest SO2

emissions are calculated to be 0.00622 TPY. Over the past few years, the largest 12-month rolling NOx emissions occurred in July of 2021 at 11.76 TPY. The average 12-month rolling NOx emissions are around 10.8 TPY. JBS uses the fuel usage and the AP-42 emission factors to calculate the NOx and SO2 emissions from natural gas and biogas.

FGBOILERS&FLARE have material limits for each type of fuel that. JBS is required to keep a 12-month rolling material usage to show compliance with these limits. The facility was able to provide accurate 12-month rolling records for biogas and natural gas throughput. The records showed that since January 2021 the largest annual throughput for natural gas to FGBOILERS&FLARE occurred in May 2021 which used 120.95 MMCF. The average throughput of natural gas in the time period is around 114.7 MMCF. These are well below the limit of 570 MMCF of natural gas used in FGBOILERS&FLARE. The 12-month rolling annual biogas throughput to EUFLARE averaged around 180.4 MMCF since January 2021. The largest 12-month rolling biogas usage for this time period occurred in July 2021 in which 208.61 MMCF of biogas were used. This is well below the permit limit of 389 MMCF.

JBS has installed flowmeters to track biogas usage. These flowmeters are calibrated annually. JBS was able to provide documentation that Forberg Smith Process Solutions last calibrated the equipment on August 31, 2021. The facility appears to conduct these calibrations annually as the previous calibration was conducted on August 11, 2020.

There were no visible emissions that were observed from any of these emission units during the inspection.

FGHEATERS:

This flexible group is permitted for three Armstrong direct fired heaters with a heat input capacity of 10 MMBTU/hour. These heaters were all installed February 8, 2008. These are designed to burn both natural gas and biogas. JBS tries to operate the heaters as much as possible on biogas. One of the heaters have been recently decommissioned. The facility did install a replacement heater that was installed under an exemption claimed by the company. Due to the facility installing the equipment under an exemption and not going through New Source Review (NSR) for the heater installation the heater is not subject to the PTI conditions, but rather the requirements of the claimed exemption. The exempt heater will be discussed later in EUHEATER282(2)(g). These heaters are also subject to 40 CFR Part 60 Subparts A & Dc.

This flexible group has a material limit for the combined gaseous fuel that is used in the direct fired heaters. JBS is required to keep a 12-month rolling material usage to show compliance with these limits. The average 12-month rolling gas usage (both natural gas and biogas) for the direct fired boilers is around 135.5 MMCF for the time period of January 2021 through March 2022. This is well below the permit limit of 375 MMCF. Mr. Anderson did state that these gas usage records include the EUHEATER282(2)(g). As stated previously since EUHEATER282(2)(g) was not installed in through NSR the permit conditions are not applicable to the emission unit. The facility would be over reporting the gas usage records and are still well below the permitted limits. The facility should either adjust recordkeeping to only account for the two heaters that are still permitted or go through NSR to have the newly installed heater evaluated.

FGHEATERS is required to track the NOx emissions. Staff reviewed emissions records for the period of January 2021 through March 2022. The average 12-month rolling NOx emissions are around 6.8 TPY for the time period, while the largest 12-month rolling NOx emission occurred in March 2022 in which 9.11 TPY of NOx were recorded. The NOx emissions are well below the 18.75 TPY emission limit. Mr. Anderson did state that these gas usage records include the EUHEATER282(2)(g). As stated previously since EUHEATER282(2)(g) was not installed in through NSR the permit conditions are not applicable to the emission unit. The facility would be over reporting the NOx emissions records and are still well below the permitted limits. The facility should either adjust recordkeeping to only account for the two heaters that are still permitted or go through NSR to have the newly installed heater evaluated.

There were no visible emissions that were observed from any of these emission units during the inspection. JBS uses the flowmeters to track biogas usage for this flexible group. The last calibration of the flowmeters was August 31, 2021.

EUHEATER(2)(g):

As part of the inspection the facility submitted a PTI Determination for an Armstrong Gas Fired Flo-Direct Water Heater (Heater) as a like for like of an existing direct fire heater. It was noted in the determination that the heater would have an output of 10 MMBTU/hr and fired by natural gas and biogas. As part of the determination the facility indicated that the heater has a SO2 emission rate of 0.09 lbs/hr which is below the 1.0 lbs/hr maximum emission rate in the Rule 282 (2)(g) exemption. The PTE for the NOx is calculated to be 24 TPY from this emission unit.

The PTE for this emission unit should be held separate from the FGHEATERS, as the emission unit was installed under an exemption. Staff did discuss the PTE from this heater with a consultant that JBS hired. The consultant works with Tetra Tech. The discussion with the consultant indicated that the calculated 24 TPY NOx emissions is likely wrong. This is due to the original PTI that the heaters were installed under calculating all three heaters to have a PTE of the 18.75 TPY when operated on a continuous basis. This would make the PTE around 6.25 TPY of NOx for a single unit if the unit is actually a like for like.

FGBIOGENS:

These engines were added in the in the late PTI modification that was issued on January 18, 2022. This issued the PTI No. 71-03D. During the inspection the facility was in the process of setting the foundations for the engines. Being that the engines were not operating no records were requested for this flexible group. The facility did indicate that the engines may be operating in the fall of 2022.

Potential To Emit:

Staff reviewed the NOx emissions for the permitted equipment under PTI No. 71-03D. The PTI permit limits and NOx calculation using operating hours and emission factors would appear to have the total NOx emissions around 102.8 TPY without including any exempt equipment. This would have the PTE of the facility over major source thresholds with the addition of the FGBIOGENS. Since the FGBIOGENS engines have not been installed yet and are due to be operating in fall 2022 the facility would either have to submit an ROP application within 12

months of the startup of the FG BIOGENS engines per Rule 210 or obtain a proper Opt-Out permit that limits the NOx emissions facility wide to below major thresholds.

Discussion with the consultant have shown that the facility is in the works of applying for and obtaining an Opt-Out PTI that limits the source wide emissions for NOx, CO, and SO2 along with more Biogas limits.

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 compliance with PTI No. 71-03D. However, after a review of the PTE the facility does need to address the NOx PTE. As previously stated, the facility should either submit an ROP application within 12 months of startup of the FG BIOGENS engine per Rule 210 or obtain a proper Opt-Out permit that limits the facility to below major source thresholds for all criteria pollutants that are needed. Staff stated to Mr. Anderson that a report of the inspection would be sent to the facility for their records. Staff concluded the inspection at 11:45 PM.-CJY

NAME Cody Yaggi

DATE 9/13/22

SUPERVISOR RIL 9/15/22