

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

B711769704

FACILITY: Gavilon Grain LLC		SRN / ID: B7117
LOCATION: 3274 CARROLLTON ROAD, CARROLLTON		DISTRICT: Bay City
CITY: CARROLLTON		COUNTY: SAGINAW
CONTACT: Peter Jones , Location Manager		ACTIVITY DATE: 10/23/2023
STAFF: Gina McCann	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Inspection of PTI 124-14, 94-80 and NSPS DD. PTI 94-80 was voided after this inspection.		
RESOLVED COMPLAINTS:		

I (glm) completed an unannounced inspection of Viterra, previously Gavilon Grain, LLC on October 23, 2023. I met with Peter Jones, Location Manager and Josh Neitzel. We toured the facility and all associated emission units. A Malfunction Abatement Plan (MAP) request was sent on October 30, 2023 as follow-up to this inspection. At the time of the inspection the facility appeared to be in compliance with PTIs #124-14, 94-80, NSPS DD and applicable state air quality regulations.

Facility Description

The facility is a grain terminal elevator located in Carrollton, Michigan along the Saginaw River, with a permanent storage capacity of 2,832,400 million bushels. The facility is in an area with mixed zoning. Along the river front is generally zoned commercial and/or industrial and properties adjacent to the riverfront are zoned residential. They are an opt-out source for PM.

Throughout the years AQD has received varying complaints from residence regarding “bees wings” or the chafe from corn kernels. Review of the complaint file for the last five years shows one in 2022 and 2016 and two in 2015.

The facility received a complaint regarding “bees wings” on November 3, 2022 and AQD verified the complaint on November 4 and 7, 2022. The agency sent a violation notice on November 16, 2022 for opacity exceedances of the NSPS DD, R 336.1901, and permit conditions requiring proper operation of pollution control devices.

PTI #124-14

The facility underwent permitting in 2014 due to rescinding of Rule 208a. It was determined the country grain elevator is a true minor source. Potential to emit (PTE) calculations were performed using the U.S. EPA guidance memorandum “Calculating Potential to Emit (PTE) and Other Guidance for Grain Handling Facilities”, November 14, 1995. The guidance essentially says country grain elevators throughput is constrained in their operations due to the limited geographic area from which a finite amount of grain can be grown and harvested. The determinant of which given elevator will be used by a farmer is the proximity of the elevator to the harvest and is generally the same from year to year. The PTE should be determined based upon a more realistic estimate of the maximum amount of grain that could be received during a record crop year in the geographic area instead of a year-round operation maximum rate of operation. Therefore, the highest amount of grain received during the previous five (5) years, multiplied times and adjustment factor of 1.2, will constitute an upper bound on the amount of grain a country elevator could receive. Gavilon Grain’s maximum grain received for the five (5)

year period prior to permitting was 402,901 tons in 2013, multiplied by the correction factor of 1.2 or 483,481 tons. Then if current operations do not exceed this tonnage the permit evaluation is still effective. Below is a table of tons of grain received for the past five (5) years. The facility did not exceed levels reviewed during permitting.

Year	Tons of Grain Received
2022	257,654
2021	206,056
2020	122,579
2019	195,122
2018	232,307

EU-GALLERYBELT

The gallery belt grain handling system is controlled a baghouse. Special condition I.2., requires the facility to comply with a visible emission, six-minute average of 0 percent opacity on the gallery belt grain handling system. The gallery belt system is enclosed and at the time of the inspection there was no visible opacity. The facility does document daily pressure differential readings. However, the desired operating range of the pressure differential was unknown as well as the values that trigger corrective action. The baghouse was not turned on during the inspection. A MAP was requested as follow-up to this inspection.

EU-BASEMENTBELT

The basement belt grain handling system is controlled by a baghouse. The basement belt system only runs when loading a train or if the product is being transferred. Special condition I.2., requires the facility to comply with a visible emission, six-minute average of 0 percent opacity on the basement belt grain handling system. The basement belt system is enclosed and at the time of the inspection there was no visible opacity. The facility does document daily pressure differential readings. However, the desired operating range of the pressure differential was unknown as well as the values that trigger corrective action. The baghouse was not turned on during the inspection. A MAP was requested as follow-up to this inspection.

Associated pictures demonstrate the enclosure of the conveyor belt system. The project also included automating the switch from bin to bin. Previously this was done manually. A control room has been set up for the operators which houses the PLC units and control screens. The

facility was asked about adding the baghouse pressure differentials to the PLC so trends can be observed, and operators can mitigate situations prior to baghouse malfunctions. This has been discussed internally but is not slated as part of this project. It was advised there is value in adding this type of monitoring to the screens.

EU-TRKREC/UNLOAD

There are three loadouts for the train one of which can also unload trucks. There are three dump pits for truck unloading. The truck receiving/unloading grain handling system is controlled by a baghouse. The baghouse receives quarterly inspections which include visually inspecting bags, fans, air locks, etc. The facility does document daily pressure differential readings. However, the desired operating range of the pressure differential was unknown as well as the values that trigger corrective action. A MAP was requested as follow-up to this inspection. A picture of this emission unit is below.

All loadouts are subject to the NSPS DD for grain elevators. Initial performance test records were not received. The facility states the records are beyond the 5 year record retention requirement. Yet, there is a stack test from 1993 available for the baghouse system for the bin top dust system.

At the time of the inspection the pressure differential on the magnehics was -0.04 inches of water column (" W.C.). Readings are taken at least once per day. Mr. Jones said the normal pressure differential operating range of the truck receiving is between 4.0-5.0 " W.C.

At the time of the inspection, I viewed a couple of trucks unload. Trucks pull through the bay and unload in dump pits. The door at the end of the bay closes as the truck noses out the one end. I did not perform a certified VE reading, though the opacity was limited and appeared to be below the 5% limit in special condition I.3.

The facility maintains a written log of the number of grain trucks dumped daily and maintains a fugitive dust plan as required in PTI # 124-14. The plant received calcium chloride over the summer, which was applied to the unpaved areas of the yard. They do not own a vacuum type of sweeper as the plan suggests, however they do push broom the yard frequently. The yard appeared to be maintained.

PTI #94-80

This permit is for a Berico dryer. This permit is vintage and has minimal requirements. Special condition 12 restricted visible opacity from the dryer to 0% opacity. The facility replaced this equipment with a Zimmerman column dryer, see photos. The request to void the permit will be submitted.

The NSPS DD requires column dryers with column plate perforations exceeding 2.4 mm diameter to perform testing to comply with emission standards. The perforation size is 0.078 inches and therefore not subject to the particulate standards.



Image 1(Basement Conveyor) : Summer 2023 project enclosing conveyor vents in basement to improve dust handling. Shows how one of the silos connects to the conveyor system.



Image 2(EU-TRKREC/UNLOAD) : View of receiving/unloading stations.



Image 3(Column Dryer) : View of 5,000 bushel per hour Zimmerman column dryer that replaced Berico from PTI #94-80.



Image 4(Enclosed Conveyor) : View of enclosed conveyor project from summer of 2023. Previous ductwork seen above, which has been disconnected.



Image 5(Open Conveyor) : Open conveyor system on bin floor demonstrates how the basement conveyor system was prior to 2023.



Image 6(Overflow Pad) : This area has historically been the overflow pad for grain when the silos became full the facility would put grain to the ground. Wall surrounding pad removed. Plan to discontinue going to the ground.



Image 7(Old House Dryer) : View of 3,000 bushel per hour Zimmerman column dryer.

NAME 

DATE 11/2/2023

SUPERVISOR 