

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

N514063907

FACILITY: VAN ELDEREN INC		SRN / ID: N5140
LOCATION: 892 E ALLEGAN, MARTIN		DISTRICT: Kalamazoo
CITY: MARTIN		COUNTY: ALLEGAN
CONTACT: Paul Van Elderen ,		ACTIVITY DATE: 06/29/2022
STAFF: Cody Yazzie	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On June 29, 2022 Air Quality Division (AQD) staff (Cody Yazzie) arrived at 892 East Allegan Street, Martin Michigan at 2:30 PM to conduct an unannounced air quality inspection of Van Elderen, Inc. (hereafter Van Elderen) SRN (N5140). Staff made initial contact with the office receptionist and stated the purpose of the visit. Paul Van Elderen, Van Elderen, Owner, is the environmental contact and arrived shortly thereafter and took staff to his office for further discussions.

Van Elderen is a spray dried animal protein products and dried fruit and vegetable ingredient manufacture. The Martin locations spray dry eggs, pork liver, beef liver, and duck product. The Martin location has two spray dry operations that are across the street from each other but operate as and are evaluated as one stationary source. Each facility has their own permit to install (PTI). The facility commonly refers to these PTI's or facilities by the street number they are associated with. PTI No. 35-94B is 892 (Facility on the Southside of Allegan Street) and PTI No. 292-07B is 899 (Facility on the Northside of Allegan Street). The facility currently operates 24 hours per day 7 days a week and only shutdown for major holidays.

Van Elderen was last inspected by the AQD on May 17, 2012 and appeared to be in Non-compliance at that time with PTI No. 35-94A and PTI No. 292-07 Staff asked, and Mr. Van Elderen stated that the facility does not have any Boilers, emergency generators, or cold cleaners.

Mr. Van Elderen gave staff a tour of the facility. Required personal protective equipment are safety glasses, hard hat, steel toe boots, hearing protection, and high visibility vest. Staff observations and review of records provided during and following the inspection are summarized below:

PTI No. 35-94B:

This facility as mentioned above is referred to as the 892 Facility. The flow of operation and control for this facility is currently a spray dryer that has its particulate matter (PM) emissions controlled by dry fabric filter baghouse. After the PM emissions are controlled, the exhaust is then duct to a 15,000 CFM rotary valve regenerative thermal oxidizer (RTO) which is used to control odors. During the inspection Mr. Van Elderen indicated to Staff that he did have plans to add a scrubber that was ducted in parallel with the RTO. Staff stated to Mr. Van Elderen would need to apply for a PTI modification to operate the emission unit with the scrubber control. This addition would be the same set up of controls that are at the 899 Facility. This would allow the facility to operate either the RTO or scrubber as a control to odors. During the inspection it was also noted that the current PTI No. 35-94B indicates that the PM emissions are controlled by 15,000 CFM wet particulate scrubber. This was not the case as Mr. Van Elderen stated that while they were operating the wet particulate scrubber it did not appear to perform as well as they had

hoped. The facility replaced the wet particulate scrubber with the dry fabric filter baghouse. This control device replacement appears to be done through the use of Rule 285(2)(d), which is for reconstruction or replacement of air pollution control equipment with equivalent or more efficient equipment. This does appear to meet the requirements of the exemption.

EUSPRAYDRYING:

The facility submitted the Malfunction Abatement Plan (MAP) for the 892 Regenerative Thermal Oxidizer Malfunction Abatement Plan (MAP). The MAP is required by Special Condition III.1. The submitted MAP appears to include all the required information required by the Special Condition and Rule 911. Included in the MAP are a designation of individuals that are responsible for the implementation and maintenance of the MAP. The MAP outlines what control devices are used in the process along with normal operating variables/limits. The MAP also outlines and includes a schedule for preventative maintenance and inspection.

The facility is required to monitor and record the combustion chamber temperature of the RTO and record the temperature on a continuous basis. Staff was provided with temperature data for the following dates 11/16/21, 11/17/21, 11/18/21, 11/19/21, 12/8/21, 12/9/21, 12/10/21, 4/28/22, and 4/29/22. The facility provided these records by extracting the data into an excel file. Data from this recorder is logged about every 10 minutes. There was a start up on 4/28/22 which required the facility to get up to the required 1350°F. The records show that other than the start up the RTO appears to operate around 1550°F, which meets the minimum temperature required.

The facility does maintain 892 Mojonier Operator's Daily Checklist and Log that provides data for differential pressure readings for the Baghouse, RTO temperature, and Wind direction. This data is collected manually at 12:00 AM, 8:00 AM, 12:00 PM, and 8:00 PM. The minimum and maximum operating ranges are noted on this document for the operating variables. In addition, the log indicates if there were any process changes such as new product or if the dry was restarted/shutdown. This log also indicates any alarms and if there were actions taken. Staff was provided with these records for the dates 1/12/22, 1/24/22, 2/25/22, 3/8/22, 3/23/22, 4/27/22, 5/4/22, 5/17/22, and 5/26/22. During these requested dates baghouse differential pressure and RTO temperatures were noted as being in operating ranges.

The 892 RTO Preventative Maintenance Worksheets were also provided for maintenance that gets conducted on the baghouse and RTO. The calibration for the RTO is done monthly. The documents include all inspected parts and note any replacements/maintenance conducted.

This emission unit also has requirements for the wet particulate scrubber operation. However, since the wet particulate scrubber was replaced by a baghouse to control PM emissions the monitoring and recording has been changed to suite the baghouse. This is reflected in the monitoring of the baghouse pressure differential. It was stated that the facility could update these requirements when the facility comes in for a PTI modification to add the scrubber control.

PTI No. 292-07B:

This PTI covers 4 dryers that has its particulate matter emissions controlled by a baghouse then the discharge of the baghouse ducted to and controlled by either an RTO or PTS. There is a valve where the split to either the RTO or PTS which allows the facility to control which control device is used.

FG-899MAIN:

The facility submitted the Malfunction Abatement Plan (MAP) for FG-899MAIN on May 3, 2021. The MAP is required by Special Condition III.1. The submitted MAP appears to include all the required information required by the Special Condition and Rule 911. Included in the MAP are a designation of individuals that are responsible for the implementation and maintenance of the MAP. The MAP outlines what control devices are used in the process along with normal operating variables/limits. The MAP also outlines and includes a schedule for preventative maintenance and inspection. The MAP also included weekly and daily operating logs for the baghouse, RTO, and PTS that show operating variables, calibrations, and list of major components for the equipment.

The facility is required by Special Condition to keep all doors and windows of the process building associated with FG-899MAIN closed while spray drying. During the inspection Staff noted that the facility appeared to be complying with this requirement. In addition the facility is required to maintain a negative pressure and have it verified using the procedure outlined in Appendix A. This procedure outlines that distances that each odor/emitting point needs to be away from a Natural Draft Opening (NDO), Sizes of the NDO's, velocity of the air throughout the process, and other operating procedures. From the Natural Draft Opening Explanation FG-899MAIN document the facility appears to be meeting the requirements outlined in Appendix A.

Special Conditions IV.1-2 require that the facility operate and maintain the RTO and the PTS when FG-899MAIN is in operation. These two devices are ducted in parallel with each other, this allows the emissions to be controlled by either the RTO or the PTS but never both are operated at the same time. In the Evaluation Document for 292-07B under the source description it appears that this is how the PTI was evaluated to be operated during New Source Review. The description from the evaluation form states "After the cyclones, emissions go through a scrubber or baghouse, and then to either a RTO or PTS to control odors".

The facility is required to monitor and record the temperature in the combustion chamber of the RTO. Mr. Van Elderen indicated that the facility mainly operates the PTS. It was stated that Mr. Van Elderen believes that the PTS does just a good of job if not better to control odors. Mr. Van Elderen provided 5 recent dates in which the RTO was operated. These records were pictures of the computer system that monitors and records the data. These dates were 3/7/22, 4/28/22, 5/5/22, 5/16/22, and 5/25/22. On these dates the facility appears to be able to maintain the minimum temperature of 1400°F all maintaining above 1500°F.

The facility also is required to monitor and record the scrubber recirculated liquid flow rate, the scrubber pH, and the scrubber liquid Oxidation Reduction Potential (ORP) value. These are documented on 899 Operator's Daily Checklist and Log. These logs have readings for the baghouse, pH, ORP, Freshwater flow, PTS Flow, PTS pressure differential, and gallons of HP in tote in use. These are recorded at 12:00 AM, 7:00 AM, 12:00 PM, and 7:00 PM when in operation. Staff was provided with these records for the dates 1/12/22, 1/24/22, 2/25/22, 3/8/22, 3/23/22, 4/27/22, 5/4/22, 5/17/22, and 5/26/22. During these dates the logs were complete and showed the operating parameters to be operating in their typical operating ranges. The document also has a section dedicated to alarms that are triggered and provides a description of any actions taken if needed.

The Maintenance worksheets were also provided for maintenance that gets conducted on the PTS and RTO. The calibration log was also provided and shows the differential pressure meters, flow meters, and RTO thermocouple were calibrated on 1/10/22.

PTI No. 292-07B list 3 stacks in the stacks/vent restrictions table. Two stacks are parameters that were only applicable until the commencement of trial operation of the Viron PTS and Eisenmann RTO. These stacks are no longer applicable and can be taken out of the next PTI modification. The only stack is the SV899MAIN. There were no visible emissions observed during the inspection and the stack was unobstructed and discharged vertically upwards.

Boilers:

The facility does have 1 boiler at both the 899 and 892 facilities. Each boiler is fueled by natural gas and has a maximum heat input capacity of 3.35 MMBTU/hr. These boilers appear to be exempt from Rule 201 under Rule 282(2)(b)(i). Mr. Van Elderen stated that he did have plans to install 2 more boilers that would be around 8 MMBTU/hr. These may meet the requirements of Rule 282(2)(b)(i) as well however the facility would have to evaluate the PTE for the total project to make sure that the facility is not exceeding the significant levels that are in Rule 119 to still qualify for the Rule 201 exemption. If the total project PTE exceeds any of the significant levels the project would need to go through New Source Review.

Odors/Complaints:

The last documented odor complaint was noted on 5/5/20. Staff noted that during the inspection the Wind was a West wind. Staff drove over to 8th street which is directly East of the facility. Staff spent roughly 20 minutes trying to observe odors. During that time Staff noted that there were no odors that Staff could observe. During the inspection and while on site at the facility staff noted that the only odors that could be detected were when Staff was inside the facility that was producing product.

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. 292-07B and 35-94-94B. Staff stated to Mr. Van Elderen that a report of the inspection would be sent to the facility for their records. Staff concluded the inspection at 4:00 PM.-CJY

NAME Cody Yoppin

DATE 9/15/22

SUPERVISOR RIL 9/15/22