

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

P139771891

FACILITY: Glorious Cannabis Company		SRN / ID: P1397
LOCATION: 2497 E Huron Road, AU GRES		DISTRICT: Bay City
CITY: AU GRES		COUNTY: ARENAC
CONTACT: Heather Denham , Director of Compliance		ACTIVITY DATE: 05/14/2024
STAFF: Nathanael Gentle	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Self-Initiated Onsite Inspection		
RESOLVED COMPLAINTS:		

On May 14 2024, AQD staff conducted a self-initiated onsite inspection at Glorious Cannabis SRN P1397. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment Great Lakes and Energy, Air Quality Division (AQD) Administrative Rules and Permit to Install (PTI) No. 128-23. The onsite inspection was conducted in conjunction with observation of stack testing conducted on EUENGINE1. At the time of inspection, the facility was found to be in non-compliance.

Facility Description and History

Glorious Cannabis is located at 2497 E Huron Rd Au Gres, MI 48703. The facility specializes in the cultivation and processing of adult-use and medical marijuana. The facility consists of a series of grow rooms. Each grow room is utilized for a specific stage in the cultivation process. The plants require different daily light duration requirements at the various stages of the growing process to achieve the optimal final flowering plant for harvest. The grow rooms include the mom room, the propagation room, vegetation rooms, and flower rooms. The mom room consists of marijuana plants at various stages of maturity. These plants are used to produce clones. Portions of the mom plants are clipped and placed into a growing medium. The clippings are then transferred to the propagation room. In the propagation room, the clippings take root and grow, becoming new plants. Once large enough, the new plants are transferred to one of the vegetation rooms. In the vegetation rooms, hours of light delivered to plants is optimized to allow the plants to grow rapidly. Once plants are at the desired size, they are transferred to one of the flower rooms. In the flower rooms light duration is decreased. This triggers the plants to begin producing buds. The buds/flowers of the plant are the part of the plant utilized for the final products. Historically, harvested flowers were processed at the facility using ice water to remove trichomes. Staff report processing of the product is no longer completed onsite.

Energy used to operate the facility is primarily obtained from the grid. The facility consists of two natural gas fired emergency generators for periods in which energy from the grid is unavailable, a 500 kW and a 1MW. The 500 kW generator is powered by a natural gas fired G3412C Caterpillar engine with a lower heat value input of 5,448,420 Btu/hr. The unit operates under AQD PTI exemption Rule 285(2)(g). The 1 MW generator is powered by a natural gas fired G3516 LE Caterpillar engine with a lower heat value of 11,377,200 Btu/hr. The 1MW generator is known as EUENGINE1 and operates under PTI 128-23. The heating and cooling of the facility is accomplished by a series of natural gas fired and electric HVAC systems.

Glorious Cannabis is a minor source of all regulated air pollutants. The facility was last inspected in February 2023 following complaints received by EGLE regarding the facility. At the time of the February 2023 inspection, the facility was found to be in non-compliance. The facility was found to have installed and operated the 1 MW generator without first obtaining the appropriate Permit to Install. In response, the facility submitted a PTI application and obtained PTI 128-23.

Compliance Evaluation

PTI 128-23 was issued on November 7, 2023. The PTI encompasses EUENGINE1, a 1462 HP (1000 kW) natural gas-fueled emergency engine with a model year of 2011 or later. The emission unit is subject to 40 CFR Part 60 Subpart JJJJ- Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. EUENGINE1 is an uncertified engine. Written notification that the engine is an uncertified engine was submitted to the AQD on 12/15/2023, Special Condition (S.C.) VII.1. As a non-certified engine, the permittee shall keep a maintenance plan for EUENGINE1 and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions, S.C.III.5. A copy of the maintenance plan was requested and provided, S.C.VI.3. The maintenance checklist is broken up into four sections, Daily (in use), Monthly, Bi-Annual, and Annual. The plan outlines maintenance activities to be conducted at each frequency. Special Condition VI.3b. requires records be maintained of maintenance activities completed. Staff report records are maintained in the form of a work order system. In addition to maintenance conducted by onsite personnel, staff report bi-annual preventative maintenance inspections, and an annual load bank test are performed by the manufacturer, Caterpillar.

As an emergency engine, the permittee shall not operate EUENGINE1 for more than 125 hours per year based on 12-month rolling time period as determined at the end of each calendar month, S.C.III.2. The permittee may operate EUENGINE1 for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing, S.C. III.2. The hours for maintenance checks and readiness testing count towards the 125 hours per year based on 12-month rolling time period limit established by S.C.III.1. The permittee may operate EUENGINE1 up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted as part of the 100 hours per calendar year provided for maintenance and readiness testing, S.C.III.3. Staff report EUENGINE1 is not operated in non-emergency situations other than for purposes of maintenance and readiness testing.

EUENGINE1 is equipped with a non-resettable hours meter to track operating hours, S.C.IV.1. At the time of inspection, onsite staff were unable to point out which number on the engine readout screen was the engine hours. The number staff pointed to as the number of hours at the time of inspection and emission testing was 3292 at the beginning of test run number one. Subsequent communication from facility staff revealed this value was MWh.

Staff report the generator does not turn on automatically when energy from the grid is unavailable. Onsite staff must manually turn on the generator. Special Condition VI.4. states the permittee shall monitor and record, the total hours of operation for EUENGINE1 on a monthly and 12-month rolling time period basis, and the hours of operation during emergency and non-emergency service that are recorded through the non-resettable hour meter for EUENGINE1, on a calendar year basis, in a manner acceptable to the AQD District Supervisor. The permittee shall document how many hours are spent for emergency operation of EUENGINE1, including what

classified the operation as emergency and how many hours are spent for non-emergency operation. Staff report the emission unit had not been operated since permit issuance until the time of emission testing. The facility maintains a generator run log. A blank copy of the generator log was provided. The log documents the date and times the unit was operated, who operated the unit, the hours at the start and stop of the run, and the reason for which the unit was operated including if the operation was for emergency or non-emergency.

In response to onsite staff being unable to determine the engine hours readout, the facility compiled a Standard Operating Procedure (SOP) and training protocol for staff that operate the unit to ensure accurate hours will be recorded in the generator log moving forward. A copy of the SOP was provided to AQD staff for review. Included in the SOP are instructions and pictures explaining where to view the engine hours. In the picture taken of the engine readout display for the SOP the engine hours display reads 5936 hours.

At the time of inspection, engine hours were not being determined on a 12-month rolling basis. Due to the fact the engine had been operated less than 125 hours since permit issuance, AQD staff were able to verify compliance with S.C.III.1. However, onsite staff were made aware both monthly and 12-month rolling time period records need to be maintained moving forward.

EUENGINE1 has permitted emission limits of 2.0g/HP-hr NO_x, 4.0g/HP-hr CO, and 1.0g/HP-hr VOC. The underlying applicable requirements for the emission limits are listed in the PTI as 40 CFR 60.4233(e), Table 1 to 40 CFR Part 60 Subpart JJJJ. Special Condition V.2. stipulates within 180 days of permit issuance of EUENGINE1, the permittee shall verify NO_x, CO, and VOC emission rates from EUENGINE1 by testing at owner's expense. As an uncertified engine, subsequent performance testing shall be conducted every 8,760 hours of engine operation or every 3 years thereafter, whichever comes first, S.C.V.1. Testing to verify the emission rates from EUENGINE1 was being conducted at the time of inspection, 5/14/2024. PTI 128-23 was issued on November 7, 2023; 180 days from permit issuance was May 5, 2024. Testing was completed after 180 days of permit issuance. A Violation Notice (VN) will be issued for the late test following receipt of the official test report. Facility staff were made aware of the late test date and that a VN would need to be issued.

Performance tests shall be conducted according 40 CFR 60.4244, S.C.V.1b. As part of the testing requirements, 40 CFR 60.4244a states each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load. AQD staff observed the percent load during test run number one and part of test run number two. AQD staff observed the percent load at which EUENGINE1 was operated during official test runs range from 74.53% to 96.50%. The unit was not operated within 10 percent of 100 percent peak load during the duration of test runs. Furthermore, the unit was observed operating within 10 percent of 100 percent peak load during a portion of run two, indicating operating at that percent load is achievable. Onsite staff were made aware the emission testing may not be valid. A complete report of the test results shall be submitted within 60 days following the last date of the test. Compliance with the test method and emission limits will be determined following receipt of the test results.

Summary

On May 14 2024, AQD staff conducted a self-initiated onsite inspection at Glorious Cannabis SRN P1397. Glorious Cannabis is located at 2497 E Huron Rd Au Gres, MI 48703. The facility specializes in the cultivation and processing of adult-use and medical marijuana. The facility operates a 1MW emergency generator. The unit is permitted under PTI 128-23 as EUENGINE1. The onsite inspection was conducted in conjunction with observation of emission testing of EUENGINE1. At the time of inspection, the facility was in non-compliance. Testing to verify the NOx, CO, and VOC emission rates from EUENGINE1 was not conducted within 180 days of permit issuance.

Nathanael Dente
NAME

DATE 6/24/2024

Dine J. McFarlane
SUPERVISOR