

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

P121563845

<b>FACILITY:</b> 42 Degrees Processing, LLC		<b>SRN / ID:</b> P1215
<b>LOCATION:</b> 606 S PARK DRIVE, KALKASKA		<b>DISTRICT:</b> Cadillac
<b>CITY:</b> KALKASKA		<b>COUNTY:</b> KALKASKA
<b>CONTACT:</b> Ryan Herbert , Maintenance Manager		<b>ACTIVITY DATE:</b> 06/30/2022
<b>STAFF:</b> Caryn Owens	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> SM OPT OUT
<b>SUBJECT:</b> On-Site Inspection and Records Review		
<b>RESOLVED COMPLAINTS:</b>		

On Thursday, June 30, 2022 Caryn Owens of the Department of Environment, Great Lakes, and Energy (EGLE) – Air Quality Division (AQD) conducted a scheduled field inspection and records review of 42 Degrees Processing, LLC (42 Degrees) (P1215) located at 606 South Park Drive in the Village of Kalkaska, Kalkaska County, Michigan. More specifically the site is located on the south side of South Park Drive, in the southeast corner of the Kalkaska industrial park, and approximately ¼ mile south of Dresden Road in Kalkaska. The purpose of this inspection was to determine the compliance with permit to install (PTI) 98-21. 42 Degrees was listed as a minor source, however, preparation for this inspection AQD realized the facility has opted-out of major source applicability by limiting their material limit for each extraction process to remain below major source thresholds.

42 Degrees is subject to New Source Performance Standards (NSPS) – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40 CFR Part 60 Subpart JJJJ), and the site is an area source for National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (40 CFR, Part 63, Subpart ZZZZ). Compliance with 40 CFR Part 60 Subpart JJJJ, shows compliance with 40 CFR, Part 63, Subpart ZZZZ.

#### **Evaluation Summary**

Based on the activities covered during this field inspection and records review, the facility is in compliance with PTI 98-21. Review of the records for the facility indicates the facility was in compliance with emission limits in accordance with the current PTI. No further actions are necessary at this time. Specific permit conditions that were reviewed are discussed below.

#### **On-site Inspection:**

The weather conditions were partly cloudy with winds out of the southwest approximately 10 miles per hour, and approximately 80 degrees Fahrenheit. I met with Mr. Ryan Herbert, the Maintenance Supervisor of 42 Degrees, who accompanied AQD through the facility to observe the permitted emission units and associated processes. The facility consisted of one main building the southern half of the building consisted of the following activities: filtration; extraction; purging; and distilling of cannabis biomass and cannabis material. The northern half of the building contains shipping, receiving, and storage of the product and cannabis. There is also an emergency generator outside, east of the building. The facility is permitted for 2 engines, but only have one located onsite at this time. There are three extraction booths at the facility. Two of the extraction booths use butane, and one of the booths use ethanol which are used to extract out the “crude” product to be used in different concentrations in their edible products. During the inspection, only one of the butane extraction booths and the ethanol booth were operating. The other butane extraction booth one was used for storage. No odors were present outside of the main building during the inspection.

#### **PTI 98-21 Compliance Evaluation:**

**FGENGINES:** This Flexible Group is for two (2) - 82 horsepower (HP), 2-stroke, lean-burn natural gas-fueled emergency engine manufactured after 2019. At the time of the inspection, only one of the permitted engines was present onsite, and was uncontrolled.

##### **I. Emission Limits:**

The emission limits for FGENGINES are 2.5 grams per horsepower-hour (g/hp-hr) of Nitrogen Oxides (NOx), 95.32 g/hp-hr of carbon monoxide (CO), and 1.6 g/hp-hr of volatile organic compounds (VOC). The engine is certified to meet these emission limits.

##### **II. Material Limits:**

The facility is connected to the local natural gas pipeline, and the engine only burns natural gas in the engine in FGENGINES.

**III. Process/Operational Restrictions:**

The engine in FGENGINES is operated on a routine schedule and operated once per month for 15 minutes. The engine is equipped with a non-resettable hour meter and was at 171.2 hours. The usage is well below the permit limit of 500 hours per 12-month rolling time period, below the 100 hours per year for the purpose of necessary maintenance checks and readiness testing, and operates below the 50 hours per year in non-emergency situations. The engine is a certified engine, and the facility operates and maintains the engine in accordance with the manufacturer's recommendations.

**IV. Design/Equipment Parameters:**

The nameplate capacity of the engine in FGENGINES shall not exceed 82 HP, based on the picture from the engine nameplate, the engine is rated at 82 HP. As previously stated, the engine in FGENGINES is equipped with non-resettable hour meters to track the operating hours of the engine.

**V. Testing/Sampling:**

Testing/Sampling is not applicable at this time for FGENGINES, since it is still considered a certified engine.

**VI. Monitoring/Recordkeeping:**

The facility is operating the engine as certified by the manufacturer, and monitors and records the total hours of operation on a monthly basis.

**VII. Reporting:**

As previously stated, the facility operates only one engine in FGENGINES at this time. The current engine at the facility is a certified engine, and the certification documentation was submitted with the permit application when it was permitted. The facility will submit documentation in accordance with the PTI when a new engine is installed.

**VIII. Stack/Vent Restrictions:**

During the inspection, the stack of the engine appeared to meet permitted limits of less than 3 inch diameter and at least 4.8 feet above ground surface.

**IX. Other Requirements:**

Based on the Conditions in the permit, the facility complies with the applicable provisions for the NSPS for Stationary Spark Ignition Internal Combustion Engines (40 CFR Part 60, Subpart JJJJ) and NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CFR Part 63, Subpart ZZZZ).

**FGPROCESSES:** Three (3) Solvent based cannabis extraction units (consisting of one ethanol unit and two butane units) and associated Cannabis transfer from storage via leg/conveyance/belt/distributor to extraction lines. The extraction units are uncontrolled.

**I. Emission Limits:**

The emission limit for FGPROCESSES 29.8 tons of volatile organic compounds (VOC) per year based on a 12-month rolling time period, as determined at the end of each month. Based on the records reviewed, the emissions were reported at 2.7 tons VOC per year and within the permitted limits.

**II. Material Limits:**

The facility is limited to 70,000 gallons per year of ethanol and denatured ethanol based on a 12-month rolling time period and 13,000 gallons per year of butane per extraction booth. Based on the records reviewed, the facility used 3215 gallons of ethanol and 6658.4 gallons of butane from June 2021 through June 2022 and are within permitted limits.

**III. Process/Operational Restrictions:**

The facility updated and submitted a Malfunction Abatement Plan (MAP) on May 24, 2022. AQD approved the MAP on May 26, 2022. According to Mr. Herbert, the exhaust fans of the ethanol booth is inspected on a monthly basis and the inspections are recorded in their computer system. They inspect, test, and calibrate the butane sensors and CO<sub>2</sub> sensors on a quarterly basis in the butane booths and recorded on a Gas Calibration log. Additionally, the pressure relief valves for both the butane and ethanol extraction booths are inspected on a monthly basis and recorded in their computer system.

**IV. Design/Equipment Parameters:**

The facility appears to be following their MAP and in accordance with manufacturer's recommendations.

**V. Testing/Sampling:**

Testing/Sampling is not applicable for FGPROCESSES.

**VI. Monitoring/Recordkeeping:**

The facility maintains the volume in gallons of each solvent used, VOC mass emission calculations for the monthly emission rates in tons per calendar month and tons per year, and the hours of operations. The facility now has a year's worth of calculations and will continue to maintain the VOC emission rate calculations on a monthly and 12-month rolling time period basis. The records are attached.

**VII. Reporting:**

There are no Reporting Conditions applicable for FGPROCESSES.

**VIII. Stack/Vent Restrictions:**

There are no Stack/Vent Restrictions applicable for FGPROCESSES.

**IX. Other Requirements:**

There are no Other Requirements applicable for FGPROCESSES.

NAME *Camp Owens*

DATE \_\_\_\_\_

SUPERVISOR \_\_\_\_\_