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

P078962276

FACILITY: KALITTA AIR, LLC		**SRN / ID:** P0789
LOCATION: 5063 SKYWAY STREET, OSCODA		**DISTRICT:** Bay City
CITY: OSCODA		**COUNTY:** IOSCO
CONTACT: Mary Meltz , PTI/Safety		**ACTIVITY DATE:** 03/17/2022
STAFF: Nathanael Gentle	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Scheduled On-site Inspection FY2022		
RESOLVED COMPLAINTS:		

On March 17, 2022, AQD staff conducted a scheduled onsite inspection at Kalitta Air LLC, SRN P0789. Staff arrived onsite at 10:20 AM and departed at 2:05 PM. 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 to evaluate compliance with the facilities Permit to Install, PTI No. 24-17. EGLE staff were assisted onsite by Ms. Mary Meltz. At the time of inspection, the facility was found to be in compliance.

Facility Description and History

Kalitta Air is located at 5063 Skyway Street Oscoda, Michigan on the former Wurtsmith Air Force Base. The facility provides aircraft maintenance and repair services. Services provided include, whole aircraft painting, engine testing, parts repairs, parts cleaning, parts heat treating, and parts coating. One PTI is associated with the facility, PTI No. 24-17. The facility is a synthetic minor source for Volatile Organic Compounds (VOCs) which is the main concern criteria pollutant. Additionally, the facility is an opt-out source for Hazardous Air Pollutants (HAPs).

As a synthetic minor source, Kalitta Air is required to report emissions in MAERS. The facility has historically submitted these reports on time and complete to the AQD. No recent complaints are on file for the facility. Kalitta Air was last inspected in April 2018. At the time of the 2018 inspection, the facility was found to be in compliance.

Compliance Evaluation

EU-TestCell

Aircraft engines are tested in the facilities engine test cell. Engines are removed from aircrafts and suspended within the test cell. The engines are operated within the test cell while staff monitor operating parameters. Each engine is evaluated at a range of operating capacities, up to maximum capacity. The test cell is rated to test engines up to a maximum engine size of 100,000 pounds of thrust.

Engines tested in EU-TestCell are fueled with Jet A aviation fuel. A copy of the fuel SDS was provided, S.C. VI. 2. The fuel used was verified to meet component specifications of S.C. II. 1. Fuel usage in EU-TestCell shall not exceed 1,000 gallons per hour, S.C. II. 2. Additionally, fuel usage shall not exceed 300,000 gallons per 12-month rolling period as determined at the end of each

calendar month, S.C. II. 3. EU-TestCell is equipped with a device to monitor and record fuel usage, S.C. IV. 1. Records of fuel usage are maintained, S.C. VI. 3.

Fuel usage records were provided and reviewed for the period of January 2021 through February 2022. Records are maintained of fuel usage daily, weekly, monthly, and 12-month rolling. The monitoring equipment EU-TestCell is equipped with is unable to monitor fuel usage on an hourly basis. In order to determine hourly fuel usage rates, facility staff average the daily fuel usage. During the period of records reviewed, the largest hourly fuel usage rate was calculated to occur on February 18, 2022 with 529 gallons of fuel used per hour, below the facility limit of 1000 gallons per hour, S.C. II. 2.

Monthly fuel usage totals are maintained. Using the monthly fuel usage totals, monthly SO2 emissions from EU-TestCell are calculated. During the reviewed period, the month with the highest fuel usage was March 2021 with 21358 gallons of fuel used. SO2 emissions for March 2021 were calculated to be 1.457 tons.

Monthly fuel usage records are used to determine fuel usage on a 12-month rolling time period. During the period of records reviewed, the highest 12-month rolling time period fuel usage occurred at the end of August 2021 with 190945 gallons of fuel used, well below the facility limit of 300000 gallons per 12-month rolling period, S.C. II. 3. SO2 emissions for the 12-month rolling time period at the end of August 2021 were calculated to be 13.02 tons, below the facilities limit of 20.5 tpy, S.C. I. 1.

FGHangars

FGHangars is comprised of hangars in which whole aircraft painting is conducted. Hangars within this flexible group include hangars 3, 5, 7, 8, and 9. In addition to whole aircraft painting, hangars within FGHangars contain individual coating booths and aerosol cans are used for coating application. For record keeping purposes, each hangar within the flexible group is considered an emission unit.

Exhaust vents for hangars in FGHangars are equipped with filters. Additionally, individual coating booths within the hangars are equipped with filters. All filters are maintained and changed regularly. Spent filters are placed into bags to minimize the introduction of air contaminants to the outer air, S.C. III. 2. Records of filter changes are maintained and provided for calendar year 2021 through February 2022, S.C. VI. 4. Records track filter changes per month, documenting the filter types in each hangar and how often each is changed. The records provided demonstrate regular filter changes are conducted. Facility personnel report coating booth filters are changed based on visual appearance, as well as material types and amounts used within each of the booths. Hangar exhaust filters are typically changed monthly, regardless of visual appearance. Materials that contain volatile organic compounds (VOC) and/or hazardous air pollutants (HAP) are kept covered when not in use in order to minimize the generation of fugitive emissions, S.C. III. 3.

Whole aircraft painting is conducted with HVLP spray applicators, S.C. IV. 2. Special condition III. 4. states that whole aircraft coating operations shall be conducted in only one hangar at a time. Facility personnel report compliance with this condition is maintained as the facility has only one whole aircraft painting crew.

Material usage is tracked for hangars in FGHangars. Coatings used at each individual coating booth within the hangars are tracked using daily coating logs located at each booth. Staff that use the coating booths document the products and volumes used. This information is transcribed into spreadsheets where VOC emissions are then calculated and tracked. The whole aircraft coating crew tracks coating types and volumes used. This information is also transcribed into spreadsheets. Coating types, volume used, and the associated VOC emissions are tracked for each hangar in FGHangars. Values used for VOC calculations are derived from manufacturer SDS for each of the coatings used. For sds values that are given as a range, staff correctly use the higher value in the range. Additionally, staff periodically review sds dates to ensure the most current sds and values are used. Special Condition V.1. states that the facility shall determine the VOC content, water content and density of any coating as applied and as received, using federal Reference Test Method 24. Upon prior written approval by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. Following the onsite inspection, facility staff submitted a request on March 24, 2022, to use manufacturer formulation data to determine the VOC content. The Bay City District Supervisor provided written approval to the facilities request on March 24, 2022.

Material usage and emission records were provided for each hangar for the period of calendar year 2021 through February 2022, S.C. VI. 3. Any one hangar portion of FG-Hangars is limited to emitting 2,000 pounds of VOC per month, S.C. I.2. Additionally, any one hangar portion of FG-Hangars is limited to emitting 8.0 tpy on a 12-month rolling time period, S.C. I.1. During the period of records reviewed, the highest monthly emissions occurred in Hangar 8 in June 2021 with 57.90 lbs of VOCs emitted, well below the facilities limit of 2,000 lb/month. The hangar with the highest total VOC emissions for calendar year 2021 was Hangar 7 with 0.12 tons of VOCs emitted, well below the facilities limit of 8.0 tpy.

During the onsite inspection, construction of a new hangar was observed to be in progress. At the time of inspection, crews were working on foundation construction for the new hangar. Facility staff report the new hangar will be used for aircraft maintenance and is not going to be used for aircraft painting.

FG-MiscMetal

FG-MicsMetal encompasses all metal parts coating lines source wide. This includes the emission units in FG-Hangars, as well as all additional metal parts coating operations conducted in hangars and buildings not included in FG-Hangars. Other examples of coating operations onsite include coating booths, aerosol spray cans, and coating using Preval® spray systems. The Preval® spray system utilizes precharged aerosol cans that allow the user to add their own coating liquids. Procedures for tracking material usage and VOC emissions for units in FG-Hangars is discussed above as part of the FG-Hangars compliance analysis. Tracking of material usage for all other metal parts coating operations at the facility is conducted using daily coating logs located at each coating booth at the facility. Staff that use the coating booths document the products and volumes used. This information is transcribed into spreadsheets where VOC emissions are then calculated and tracked.

VOC content of each coating material used is determined using the manufacturer sds. For sds values that are given as a range, staff correctly use the higher value in the range. Staff

periodically review sds dates to ensure the most current sds and values are used, S.C. VI.2. VOC emissions are calculated using mass balance.

Records of material usage and VOC emissions for all metal parts coating lines source wide was provided and reviewed for calendar year 2021, S.C. VI.3. VOC emission totals for calendar year 2021 were 0.43 tons of VOCs, well below the facilities limit of 30.0 tpy, S.C. I.1. Of the 0.43 tons of VOC emissions from calendar year 2021, 0.37 tons were from emission units in FG-Hangars. The remaining 0.06 tons of VOCs were emitted from other metal coating operations conducted onsite.

FG-Facility

As previously discussed, the facility is an opt-out for HAPs. Included in FG-Facility is all process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment. HAPs limits for the facility are 8.9 tpy for each individual HAP, S.C. I.1., and 22.4 tpy for aggregate HAPs, S.C. I.2. Emissions are based on a 12-month rolling time period as determined at the end of each calendar month. The facility determines the HAP content of material using manufacturer formulation data, S.C. V. 1.

Records of HAP emissions from coating operations were provided and reviewed for calendar year 2021. HAP emissions from coating operations are calculated and tracked in facility spreadsheets using mass balance. The following HAPs are emitted from onsite coating operations, ethyl benzene, xylene, dibutyl phthalate, toluene, hexamethylene-1,6-diisocyanate, methyl isobutyl ketone (hexone), glycol ether, strontium chromate, barium chromate, calcium chromate, and cumene. The highest emissions for an individual HAP during calendar year 2021 was methyl isobutyl ketone (hexone) with 372.88 lbs emitted, well below the facility limit of 8.9 tpy. Total tons of aggregate HAPS emitted during calendar year 2021 was 0.368875 tons, well below the facility limit of 22.4 tpy.

Current records maintained by the facility track HAP emissions from coating operations conducted onsite. While coating operations are the primary, and largest, source of HAP emissions onsite, other processes onsite may contribute to HAP emissions. FG-Facility includes all process equipment source-wide with HAP emissions. This was brought to the attention of facility personnel. While the facility is well below their HAP emission limits, FG-Facility requires all HAP emissions be tracked. Moving forward, Kalitta Air personnel have agreed to calculate the maximum HAP emissions that could result from other processes onsite based on historical maximum operating parameters of those processes. The facility will continue to track HAP emissions from coating operations conducted onsite.

Additional Equipment Onsite

In addition to permitted equipment onsite, a variety of equipment operates under AQD exemptions. A subset of equipment was observed while onsite and is discussed below.

Cold Cleaners

A number of cold cleaners are operated onsite. The units operate as exempt under R281(2)(h). The solvent used in the cold cleaners is Brenntag Solvent 142 HT (100% naptha). The cold cleaners

remain covered when not in use. Two cold cleaners were observed while onsite. Surface area of the cold cleaners observed was visually verified to be not more than 10 square feet.

Hot Cleaners

The facility utilizes heated dip tanks for metal parts cleaning. Twelve heated parts cleaners were observed in the JT-9 engine shop. The tanks are equipped with evaporative exhaust hoods that vent to ambient air. Facility staff report the tanks are only heated when in use. A number of the heated tanks contain aqueous solutions and likely meet the exemption requirements of R285(l)(iii). However, some tanks contain acid based solutions and therefore do not meet the requirements of R285(l)(iii). Based on the limited use of the tanks containing acid solutions, the units would likely meet the requirements of exemption R290. Currently records are not in place to demonstrate compliance with R290. Information regarding R290 was provided to facility staff. Staff report additional heated parts cleaners exist onsite that may contain acid solutions. Staff said they will assess equipment onsite for R290 applicability and begin keeping appropriate records to demonstrate compliance with the exemption.

Surface Treatment

A number of surface treatment tanks are operated onsite. The tanks are Alodine® dip tanks which are used to apply chromate coatings to the surface of aluminum alloy components. Aluminum parts are placed into the Alodine® liquid. The Alodine® liquid forms a protective, corrosion resistant coating on the surface of the aluminum. The units operate as exempt under R285(2)(r). One of the Alodine® dip tanks was observed while onsite. The tank was confirmed to be vented to the general in-plant environment only. In addition, the tanks are kept covered when not in use.

Sand Blasters

Sand blasting equipment is operated onsite. The sandblasting equipment operates as exempt under R285(l)(vi). In order to qualify for the exemption, sand blasting equipment must have emissions that are released only into the general in-plant environment or equipment must be equipped with the proper filtration system. Three sand blasters in the JT-9 Engine shop were observed. The observed sand blasting equipment was confirmed to be equipped with a filtration system.

Oil Quench

An oil quench process in operated in the maintenance PMA/Machine shop onsite. The process consists of an electric oven that vents to outdoor ambient air and a heated oil dip tank that vents to the general in-plant environment. The oil dip tank is only heated when it is in use. Facility staff explained the process and how it is used to harden metal parts. The process is used for newly made metal parts after they are milled or formed. The unfinished metal parts are placed into the electric oven and heated. After the parts have been cooked in the oven, they are dipped in the oil quench.

Due to the oil quench process, the electric oven does not meet the exemption requirements of R282(2)(a)(i). The process would either need to get a PTI or could potentially meet the exemption

requirements of R290. Currently records are not in place to demonstrate compliance with R290. Information regarding R290 was provided to facility staff. Staff said they will assess the oil quench process for R290 applicability and begin keeping appropriate records to demonstrate compliance with the exemption.

Summary

Kalitta Air provides aircraft maintenance and repair services. The facility is located in Oscoda, MI on the former Wurtsmith Air Force Base. The facility is a synthetic minor source for Volatile Organic Compounds (VOCs) which is the main concern criteria pollutant. Additionally, the facility is an opt-out source for Hazardous Air Pollutants (HAPs). Based on records reviewed and the observed activities onsite, the facility appears to be operating in accordance with the requirements of PTI No. 24-17. At this time, the facility appears to be in compliance.

Nathanael Gentz DATE 3/29/2022 SUPERVISOR Chris Hare

NAME