

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

N330325853

FACILITY: DUNCAN AVIATION INC.		SRN / ID: N3303
LOCATION: 15745 S AIRPORT RD, BATTLE CREEK		DISTRICT: Kalamazoo
CITY: BATTLE CREEK		COUNTY: CALHOUN
CONTACT: Ryan Herbstreith ,		ACTIVITY DATE: 06/24/2014
STAFF: Rex Lane	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Self Initiated Inspection		
RESOLVED COMPLAINTS:		

On June 24, 2014, AQD staff (Rex Lane) conducted an unannounced scheduled inspection of Duncan Aviation (DA) located at 15745 South Airport Road, Battle Creek, Michigan. The facility was last inspected by the AQD in June 2010 and was determined to be non-compliant at that time. The purpose of this inspection was to determine the facility's compliance with Permit to Install (PTI) No. 254-05 and all applicable state and federal air regulations. Required PPE includes safety glasses and safety boots. The following will summarize plant operations and facility compliance status.

Staff arrived at the facility around 9:30 a.m. and gave the receptionist a business card, stated the purpose of the visit and requested that they contact Mr. Ryan Herbstreith, Facility Services Environmental Supervisor. The receptionist informed staff that Mr. Herbstreith had left to go to Lincoln, Nebraska for the remainder of the week. Staff asked if someone else could take them around on an air quality inspection. Shortly thereafter, Ms. Beth Ann Guthrie, WWTP specialist, came out and staff informed Ms. Guthrie that they would like to conduct an unannounced air quality inspection of the facility. Staff presented Ms. Guthrie with their credentials, provided a business card and a copy of the MDEQ's Environmental Inspections brochure. We went back to Ms. Guthrie's desk and staff asked several questions related to the facility. Duncan Aviation is a privately held business that purchased this facility from Kal-Aero in 1998. The main business function is refurbishing and maintenance of corporate aircraft and the facility operates three shifts per day, seven days per week. Paint stripping operations are done primarily on the weekends. The use of methylene chloride to strip airplane coatings was discontinued in August 2009 and was replaced with a hydrogen peroxide based product, Ardrex 2871 (MSDS attached). Staff asked for a generalized site layout map (attached) and we went up to Facility Services to obtain this information. Staff was introduced to Mr. Dave DeMott, Facility Supervisor and Mr. Mack Jones, Facility Services Manager and they went with us on the tour of the facility.

Hangars 1 through 3 are used to perform maintenance activities. Hangar 4 (ID Tag BPT 4) is used to strip existing coatings on aircraft so they can be refinished. Hangar 5 (BPT 5) is used to spray new coatings onto stripped aircraft. Hangar 6 (BPT 6 East & West) is used to strip, prime, paint and air dry aircraft. There are yellow chemical storage cabinets in each hangar that contain five gallon bulk containers of acetone and isopropyl alcohol that are used for cleanup activities and are dispensed to staff via project numbers. All bulk chemicals are stored in the chemical building and daily usage data again is tracked via project numbers and the data is provided to Mr. Herbstreith to assign chemical usage to the appropriate departments for recordkeeping and emission tracking purposes.

Permit to Install Exempt Equipment:

- There are several cold cleaners located throughout the facility that use Crystal Clean SK Premium Solvent which does not contain any halogenated solvents. This process is exempt from permitting under Rule 281(h) and is subject to certain operating requirements under Rule 707. Staff provided DA staff with cold cleaner instruction labels to post near each unit.
- Buildings A, B and D have a total of seven natural gas fired boilers. Building A has two Vessman boilers rated at 8.1 MMBtu/hour and 3.2 MMBtu/hour that were installed in 2011. Building B has a small wall mounted boiler similar in size to a domestic unit. Building D has three Raypack boilers rated at 1.63 MMBtu/hour each and one smaller domestic size boiler. The boilers provide radiant floor heat to the hangers and aprons surrounding each hanger along with sidewalk snow removal in the winter months. The boilers are maintained by an outside contractor. The larger boilers have DLEG boiler tags and recent inspection stickers. All seven natural gas fired boilers are exempt under Rule 282(b)(i) based on heat input capacity. They are also exempt from 40 CFR Part 60 New Source Performance Standards (NSPS), Subpart Dc based on installation date or heat input capacity. The boilers are also exempt from

40 CFR Part 63 Maximum Available Control Technology (MACT), Subpart JJJJJJ per 63.11195(e) because these units fire only natural gas.

The facility has one emergency generator rated at 5 Kw located adjacent to Building B that was installed in 1982. The generator is driven by a 126 Hp natural gas fired Ford engine. The unit is equipped with a non-resettable hour meter (current reading 1,842.0 hours) and is maintained by DA maintenance staff. The unit is exempt from permitting under Rule 285(g) and is also subject to 40 CFR Part 63, Subpart ZZZZ (RICE MACT). Staff did not evaluate compliance with the RICE MACT because the MDEQ-AQD has not taken delegation under the RICE MACT for area sources of HAPs.

The facility has one spray can puncturing machine located in the chemical building. This equipment is exempt from permitting under Rule 287(b).

The facility has six paint coating booths that are located throughout the facility and are operated under the Rule 287(c) exemption for coating usage less than 200 gallons per month/booth. Finish shop paint booth # 6 (BFNPB6) and # 5 (BFNPB5) are located on the 3rd floor of Building D. Interior completions paint booth # 2 (BCMPB2) is located on the 1st floor of Building D. A small downdraft paint booth # 7 (BPT 7) is located in an outbuilding attached to Hangar 6. Upholstery shop paint booth # 4 (BUPPB4) and Accessory shop paint booth # 3 (BACPB3) are located in Building D, on the 3rd and 2nd floor, respectively. The mat and panel filters appeared to be properly fitted and in good condition for each booth. Each booth is equipped with either a manometer, photohelic or magnehelic gauge to measure pressure differential across the filters. During the post-inspection review period, staff requested and the facility provided the attached coating usage records for the past six months which demonstrate compliance with the usage limit under Rule 287(c). The highest paint booth coating usage rate noted was approximately 33% of the allowable limit. Paint spray operations at the facility are subject to National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, Subpart HHHHHH for paint stripping and miscellaneous surface coating facilities. Mr. Herbstreith provided staff with a copy of their 2011 compliance certification report (attached) that was sent to USEPA, Region V. Staff did not evaluate compliance with 40 CFR Part 63, Subpart HHHHHH because the MDEQ-AQD has not sought delegation from USEPA for this regulation.

There is a solvent recovery still located in the facility's wastewater treatment building. The unit is used to recover acetone and has a batch capacity of 43 gallons. The unit is exempt from permitting under Rule 285(u).

Woodworking equipment in the Cabinet Shop room, Building D, 2nd floor exhausts to an externally vented dust collector on the roof adjacent to the 3rd floor. At the time of the inspection, no visible emissions were observed from the dust collector vent and there did not appear to be any accumulated sawdust residue on the roof in the vicinity of the collector. The woodworking equipment is exempt under Rule 285(l)(vi)(c).

Building F, accessories area has a bead blasting area that vents internally and is exempt from permitting under Rule 285(l)(vi)(B). The accessories area also has a trademarked "Alodine" cleaning system that consists of several bath compartments that are used to clean, acid etch and apply a chromate conversion coating to small parts. Attached are MSDS's associated with the cleaning system. The process is exempt under Rule 285(r)(i) and 285(r)(iii) through (v).

The facility has an above ground fuel tank farm that was installed in 1996. There are four 20,000 gallon Jet Fuel A tanks, one 20,000 gallon low lead Avgas tank, one 500 gallon diesel tank and one 500 gallon gasoline tank. All of the above ground storage tanks are exempt from permitting under Rule 284(d) or Rule 284(g)(i). The Avgas tank is subject to NSPS, Subpart Kb and an internal floating roof (IFR) was installed in the tank in September 2011 to comply with the federal standard. Following the inspection, the facility provided records (attached) which indicates that the IFR is being inspected by an outside contractor on an annual basis.

PTI No. 254-05:

Staff did not evaluate PTI special conditions related to exhaust stack height and diameter restrictions during this inspection due to inclement weather (i.e. raining with chance of thunderstorms).

Permitted emission units and flexible group units have similar process/operational limit conditions regarding capture and storage of waste coatings in closed containers and disposal of waste materials in an acceptable manner in compliance with applicable rules and regulations. During the inspection, staff observed that waste coating and solvent drum containers were properly sealed when not in use. The facility stated that the paint filters from the permitted spray booths are stored and shipped out as hazardous waste. Staff observed Gaylord containers in the wastewater treatment area that were labeled as containing hazardous waste.

Permitted emission units and flexible groups have similar recordkeeping requirement conditions related to maintaining a current listing from the manufacturer of the chemical composition of each stripper, coating and material used in the emission group. Ms. Guthrie provided a demonstration of their electronic MSDS system and staff obtained a print out of the MSDS forms for the hydrogen peroxide based stripper and the remaining two limited use materials at the facility that contain methylene chloride.

EU-StripHanger (BPT 4):

I.1 – Emission limit for VOCs is 29.6 tons/year on a 12-month rolling average. Based on records provided following the inspection, the highest rolling average reported over the previous twelve months was 15.6 tons (53% of limit).

I.4 – Facility is required to keep all doors and windows closed on the stripping hangar whenever stripping is taking place. The hanger was not in use at the time of the inspection.

I.5 – Hanger is required to be equipped and maintained with a device to show that it operates under negative pressure whenever stripping takes place. EU-StripHanger was not in use at the time of the inspection. However, the Hanger is equipped with a pressure differential gauge.

I.6 – The AQD has not required the facility submit Method 24 test results for any material to date.

I.7 – The facility is maintaining monthly stripper usage and emission records.

EU-PaintHanger (BPT 5):

2.1 – Emission limit for VOCs is 21.0 tons/year on a 12-month rolling average. Based on records provided following the inspection, the highest rolling average reported over the previous twelve months was 7.5 tons (36% of limit).

2.6 – The facility is maintaining monthly material usage and emission records.

FG-2005Equipment:

3.1 - Emission limit for VOCs is 41.4 tons/year on a 12-month rolling average. Based on records provided following the inspection, the highest rolling average reported over the previous twelve months was 7.5 tons (13% of limit).

3.3 – The permittee is required to operate the strip/paint hanger (i.e. Hangar 6) under negative pressure and keep all doors and windows closed whenever stripping is taking place. At the time of the inspection, Hangar 6 was not in use.

3.4 - Hanger is required to be equipped and maintained with a device to show that it operates under negative pressure whenever stripping takes place. Staff noted that the hanger is equipped with a magnehelic pressure gauge.

3.8 – The facility is maintaining monthly material usage and emission records for FG-2005Equipment.

FG-ACETONE:

4.1 - Emission limit for acetone is 50.0 tons/year on a 12-month rolling average. Based on records provided following the inspection, the highest rolling average reported over the previous twelve months was 23.3 tons (47% of limit).

4.5 – The facility is maintaining monthly acetone usage and emission records for FG-Acetone.

FG-Facility:

5.1a- Emission limit for each individual Hazardous Air Pollutant (HAP) is < 9.0 tons/year on a 12-month rolling average. Based on records provided following the inspection, the highest individual rolling average reported over the previous twelve months was 1.8 tons for toluene (20% of limit).

5.1b - Emission limit for aggregate HAPs is < 22.5 tons/year on a 12-month rolling average. Based on records provided following the inspection, the highest rolling average reported over the previous twelve months is 7.9 tons (35% of limit).

5.1c - Emission limit for VOCs is < 90.0 tons/year on a 12-month rolling average. Based on records provided following the inspection, the highest rolling average reported over the previous twelve months was 42.0 tons (47% of limit).

5.1d - Emission limit for methylene chloride is 530 pounds/day on a calendar day basis. Based on records provided following the inspection, the highest daily average reported over the previous twelve months was 1.7 pounds (0.3% of limit).

5.2 - The AQD has not required the facility submit Method 311 test results for any HAP containing materials to date.

5.3 - The AQD has not required the facility submit Method 24 test results for any material to date.

5.6 - The facility is maintaining HAP containing material usage and emission records on a monthly basis for FG-Facility.

5.7 - The facility is maintaining VOC containing material usage and emission records on a monthly basis for FG-Facility.

5.8 - The facility is maintaining methylene chloride containing material usage and emission records on a monthly basis for FG-Facility.

At the time of the inspection and based on a review of records received during and following the inspection, it appears that the facility is in compliance with all terms and conditions of PTI No. 254-05. -RIL

NAME RIL

DATE 7/8/14

SUPERVISOR MA7/9/2014