

Continental Aerospace Technologies, Inc.
(Manufacture of Airplane Engines/Parts)
503-0002
Major Source of Carbon Monoxide

Introduction

Continental Aerospace Technologies, Inc. (Continental) has applied for renewal of Major Source Operating Permit (MSOP) No. 503-0002. This proposed Title V MSOP renewal has been developed in accordance with the provisions of ADEM Admin. Code R. 335-3-16. The above-named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans, and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management (Department), in accordance with the terms and conditions of the permit.

The initial Title V MSOP was issued on July 28, 2000, and this is the fifth renewal. The current MSOP expires on July 27, 2025. The renewal application was received on January 27, 2025.

The facility is located in Mobile County, which is currently in compliance with all National Ambient Air Quality Standards (NAAQS).

There are no current or ongoing enforcement actions against Continental necessitating additional requirements to achieve compliance with the proposed permit conditions. The enforcement and compliance history for the facility can be found at <https://echo.epa.gov/> (Search using Facility ID AL0000000109700002).

Air Permits for the original plant were issued by the Mobile County Health Department. These permits covered Unit Nos. X001, X002, X003, X004, X005, X006, X007, and X008. These permits were incorporated into the Title V permit July 28, 2000. An Air Permit for changing an additional unit was issued on April 30, 2015, which covered Unit No. X052. These changes were incorporated into the Title V permit July 28, 2015. A permitting action occurred on April 29, 2019, which covered the planned operations of the moving portions of units to a new building and covered Unit Nos. X003, X004, X005, X007, X050, X051, X052, and X053. These changes were incorporated into the Title V permit July 28, 2020.

Facility processes consist of shotblasting operations, paint spray booth operations, solvent cleaning operations, and engine test cell operations. Late in 2019, Continental finished a new building and began moving existing equipment, installing new equipment, and retiring old

equipment. Most processes have been installed and are currently operating, although some are still being transferred.

During the previous Title V permit term, air construction permits were issued for the following processes.

- Shotblasting Operation(s) with Bag System(s) (X003)
- Polishing/Grinding Operation(s) with Cyclone(s)/Dust Collector(s) (X008)

The requirements of the above permits will be incorporated into this Title V renewal.

Since their last Title V application, two natural gas fired boilers and have been shutdown permanently for safety and will be removed from this renewal.

Continental is a major source with respect to Title V for Carbon Monoxide emissions, which mostly come from their engine testing operations.

Title V Permitted Units

The following is a list of all the facility's sources (individual emissions units) that will be part of the facility's Title V Major Source Operating Permit:

Permit Unit No.	Description of Unit
003	Shotblasting Operation(s) with Baghouse(s)
004	Engine Test Cell Operations (Experimental and Production)
005	Paint Spray Operations with Oven(s)
007	Solvent Cleaning Operations
008	Polishing/Grinding Operation(s) with Cyclone(s)/Dust Collector(s)
050	Plating and Polishing Operations
051	Gasoline Dispensing Operations
052	Diesel Fired 300 KW Reciprocating Internal Combustion Engine Operations
053	Natural Gas Fired 125 KW Reciprocating

	Internal Combustion Engine Operations
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There are four abrasive blasting operations units using steel shot and grit that exhaust to baghouses (EP-03, EP-19) at Continental. These baghouses vent to the inside of the facility. These consist of Shot Peen Machine 510: Threads (Blue Marlin) with Clemco 1648 w/ Donaldson DFO 2-2 Baghouse, Shot Peen Machine 511: Cylinders (Blue Marlin) with Clemco 1648 w/ Donaldson DFO 2-2 Baghouse, Barrell Repair (Blue Marlin) with Crozier Speed Lathe w/ Donaldson DFO 2-2 Baghouse for L475, and Wheelabrator WS 210S with Donaldson VS-1500 Dust Collector (Building 96).

There are several grinding and polishing operations that exhaust to baghouses (EP-06) at Continental. These consist of M476 with Crankshaft Polisher w/ Donaldson Baghouse, L435 Cam Deburr Lathe, L451 Speed Lathe, H646 Green Balance, and H534 Snag Grinder, which all vent to a common Donaldson DFEP-4 Baghouse. These operations also vent to the interior of the facility.

The preceding units are used as follows: Aircraft engine parts (gears, rocker arms, connecting rods, etc.) are placed on a rotary table that continually rotates past a discharge point where steel shot, glass beads, or plastic beads are hurled by a rotating wheel onto the parts. This process removes heat scale and machining burrs. Fractured steel shot, plastic beads, and scale particles are exhausted from the units into a control device and then exhausted inside the building. Similarly, aircraft engine parts are polished using polishers, sanders, grinders, and buffers. This process removes heat scale and machining burrs and abrasive materials, and scale particles are exhausted from the units into a control device then exhausted.

Continental has five paint spray booths that are used to coat or touch up engine parts (EP-07, EP-15, EP-22). These consist of the Prime Paint Booth (M1036) (EP-07) (Blue Marlin), Black/Gold Paint Booth (M1040) (EP-15) (Blue Marlin), Paint Booth - Crankcase (M882) (Blue Marlin), Showcase Paint Booth - (M645) (Building 96), and Packaging Paint Booth (Building 96). Continental also uses solvent in dip tanks (007) and test cell wash stations to clean engine parts (EP-10).

Continental performs regular and experimental tests in the test cells (004) which consists of three Production Engine Test Cells (EP-23) (Blue Marlin), nine Experimental Engine Test Cells (EP-09) (Building 26), and twelve Engine Test Cells (EP-09) (Building 96). There are two operating scenarios used to test engines during either simulated 1.5-hour flights for production engines or longer periods for simulated flights on

experimental engines. The engines are tested in “idle”, “take-off”, “climb-out”, and “approach” for varying lengths of time, depending on the scenario. They utilize either aviation gasoline or jet A fuel. These fuels and other liquids are stored in various storage tanks utilized in the list of insignificant activities.

Continental has several plating operations that treat the various metals used in their engine production. These operations include the Magnesium Phosphate Line (EP-21) (Blue Marlin) (Building 15) and Alodine Chromate Conversion Line (EP-12) (Blue Marlin) (Building 15). There will also be a Sn Plating- Crankshaft Propeller Flanges (Titan and Legacy) unit that will be classified as an insignificant source. Some of the other plating operations have been outsourced since the last Title V revision and the recent move to the new building.

Continental also has emergency generator engines for emergency power. The new electric powered fire-pump is not permitted.

Surface Coating Operations

There are individual paint booths throughout the facility that paint various parts and whole engines.

Applicable Regulations

The coating lines are not subject to any additional regulations.

Testing of Emissions

No periodic testing of emissions is required. Continental uses manufacturers’ information based on Method 24 or 311 as appropriate for the coatings used in coating operations.

Monitoring of Emissions

The coating lines are not subject to any additional regulations. Continental will maintain records of monthly coating usage and coating analysis for each line to show compliance with these requirements. These will be submitted to the Department quarterly.

Plating and Polishing Operations

There are various plating and polishing lines to process metal parts.

Applicable Regulations

The tanks are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Polishing and Plating Operations, Subpart WWWW in 40 CFR Part 63.11504. This regulation requires Continental to conduct Best Management Practices.

Testing of Emissions

No periodic testing of emissions is required.

Monitoring of Emissions

Periodic monitoring of emissions is required by the NESHAP as applicable.

Gasoline Dispensing Operations

There are various storage tanks to hold fuel for onsite use.

Applicable Regulations

The tanks are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Gasoline Dispensing Facilities, Subpart CCCCC in 40 CFR Part 63.11110. This regulation requires Continental to conduct Best Management Practices and demonstrate throughput.

Testing of Emissions

No periodic testing of emissions is required.

Monitoring of Emissions

No periodic monitoring of emissions is required.

Shotblast Operations with Cyclones/Baghouses and Polishing/Grinding Operations with Cyclones/Baghouses

Continental has many metal operations subject to opacity and particulate standards. There are particulate control devices on the metalworking operations.

Applicable Regulations

These operations are subject to the visible emissions standards found in ADEM Admin. Code R. 335-3-4-.01 and to the process weight standards found in ADEM Admin. Code R. 335-3-4-.04.

Testing of Emissions

No periodic testing of emissions is required.

Monitoring of Emissions

The baghouses and cyclones will be monitored for visible emissions. Currently, weekly observations of visible emissions are done to maintain compliance with the particulate standards. If greater than normal emissions are noted, corrective action to minimize emissions will be taken within 24 hours. This will be followed by an additional observation to confirm that emissions are reduced to normal. Records of weekly observations and any corrective actions will be retained for at least five years and will be available to be reviewed by Departmental personnel during compliance inspections.

Generators

Two emergency use only generators are included with this renewal which consist of a Generac 125 KW natural gas fired engine and a mobile Cummings 300 KW diesel fired engine. These are used for power outages and periodic testing only.

Applicable Regulations

The 125KW Generator is subject to the NESHAP for Stationary Reciprocating Internal Combustion Engines, Subpart ZZZZ in 40 CFR Part 63.3080 as a new source. The requirements are described in detail in the attached provisos. This source will show compliance by complying with the New Source Performance Standards (NSPS) as defined in 40 CFR 60, Subpart JJJJ for the natural gas fired unit as a new source.

The 300KW Generator is subject to the NESHAP for Stationary Reciprocating Internal Combustion Engines, Subpart ZZZZ in 40 CFR Part 63.3080 as an existing source.

Monitoring of Emissions

There is no regular monitoring of emissions, besides the hour meter requirements and regular periodic maintenance as required by the NESHAP. The units have shown compliance with the standards by certification by the manufacturer.

CAM

Compliance Assurance Monitoring (CAM) is not applicable for the NESHAP regulations within this Title V permit because these regulations

were proposed post November 15, 1990 (Gasoline Dispensing Facilities, Polishing and Plating Operations, Stationary Reciprocating Internal Combustion Engines). CAM is not applicable for the Title V permit for the other units listed herein because potential uncontrolled emissions of criteria pollutants do not exceed 100 tons per year on any one unit with a control device.

Fugitive Dust

The fugitive dust potential was evaluated and is not expected to be of concern at this facility. The plant property is grassed, and travel areas are covered by asphalt, concrete, or graveled surfaces. Metal waste particulate matter will pass through a filter before being emitted. No stockpiles of dust producing materials are planned. Therefore, it has been determined by the Department that a dust plan is not required at this time.

Permitting Fees

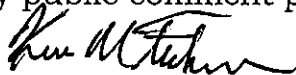
Title V major sources are subject to operating permit fees which charge the facility a yearly amount based on the actual emission rate of pollutants for the previous year.

Affected States Notification

Standard practice is to notify of the issuance of this major source operating permit to all states bordering Alabama.

Recommendations

I recommend that the Major Source Operating Permit be renewed to Continental pending resolution of any comments received during the 30-day public comment period and 45-day EPA review.



March 2025

Kevin Fulmer

Chemical Branch

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