

Statement of Basis Rehau
(Automotive Parts & Surface Coating Processes)

Major Source of Hazardous Air Pollutant Emissions

Introduction

On November 27, 2019, Rehau Auto LLC and Rehau Construction LLC, (Rehau), submitted a Title V major source permit renewal application for the manufacture and surface coating of automotive parts (SIC # 3089). Rehau is located in Cullman, Alabama. This renewal will not add any permitted units, but it will remove Boiler No. 3 (012)(20.925 MMBtu/Hr Natural Gas Fired Boiler with Propane Backup).

Operation

Plastic parts such as bumpers and fascias are injected molded using large presses. As the plastic parts are surface coated, they pass through several heat tunnels that are heated with steam from Rehau's natural gas fired boilers.

Workpieces are conveyed through the coating process by means of an overhead monorail system. A coat of adhesion promoter is normally applied first. Sometimes, the part is flame treated to promote adhesion. After the adhesion step, one or more coats of primer (color basecoat) are added. Finally, one or more topcoats (clearcoats) are applied. Water-based coatings are used on some products. Three heat tunnels follow the application of adhesion promoter, primer, and topcoat.

Regulations

The regulated criteria air contaminants emitted into the atmosphere by the surface coating of the automotive parts include volatile organic compounds (VOC), which come from the organic solvents in the paint, paint thinners, and cleanup solvents. The operations are also a source of hazardous air pollutants (HAPs) as listed in Appendix G of the ADEM Air Regulations. They also use adhesives that contain minor amounts of VOCs and HAPs. The entire facility is subject to a 245 TPY synthetic minor PSD limit for VOCs.

Emission of VOCs exceed the threshold of 100 tons per year. Therefore, Rehau is considered a major source for Title V.

The HAP emissions from the coating operation are also emitted in such quantities as to exceed the Title III and Title V major source thresholds. The HAP emission thresholds for a major source are 10 tons for a single HAP and 25 tons for a combination of any HAPs.

Coating of Polymer Automotive Parts Line with Natural Gas Fired Thermal Oxidizer with Propane Backup (003) is subject to the Plastic Parts and Products NESHAP (PPPP) regulation. In order to comply with this regulation, they use an RTO and certain coatings. The RTO is also used to comply with their synthetic minor PSD limit.

Rehau has two Touchup Booths for small repairs. Emissions of VOC from these booths are expected to continue to be below the Trivial and Insignificant (T & I) threshold; therefore, they will not be permitted.

Rehau has two paint burn off ovens with afterburners. These units are unpermitted and they have not been used in recent years. Rehau is now using an offsite vendor utilizing molten salt to clean many of the paint skids by an instead of utilizing the ovens. Emissions of VOC from these units are expected to continue to be below the T & I threshold; therefore, they will not be permitted.

Rehau, Inc. has a small printing line that applies ink to extruded pipe (food tubing). The only applicable regulations are the synthetic minor PSD limit for the entire facility. Monthly recordkeeping is kept on VOC usage.

Rehau has three natural gas fired (propane backup) boilers to supply heat for their operation. These three boilers are subject to 40 CFR 60, Subpart Dc, the Standards of Performance for New Stationary Sources: Small Industrial - Commercial - Institutional Steam Generating Units. These boilers are subject to NSPS recordkeeping requirements.

These three boilers are exempt from 40 CFR 63, Subpart DDDDD, the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers for Major Sources, except for initial notification because §63.7506(b)(1) lists an exemption from any requirements for this subpart for existing large natural gas fired boilers.

Rehau is presently using only two of the boilers and Boiler No. 3 (012)(20.925 MMBtu/Hr Natural Gas Fired Boiler with Propane Backup) has been down for some time and fallen into disrepair. It is planned to be removed from the site.

Rehau does not have any generators that need to be incorporated into this renewal.

No other criteria pollutants that are emitted in sufficient quantities, actually or potentially, to exceed the major source threshold of 100 tons per year.

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

Permit Unit No.	Description of Unit
003	COATING OF POLYMER AUTOMOTIVE PARTS LINE WITH NATURAL GAS FIRED THERMAL OXIDIZER WITH PROPANE BACKUP
005	PIPE ID MARKING/PRINTING OPERATION
010	20.9 MMBTU/HR NATURAL GAS FIRED BOILER WITH PROPANE BACKUP
011	10.5 MMBTU/HR NATURAL GAS FIRED BOILER WITH PROPANE BACKUP

Monitoring of Emissions

Rehau will maintain records of monthly coating usage and coating analysis to show compliance with their synthetic minor PSD limits. These will be submitted quarterly.

The boilers are natural gas fired with propane backup. Due to the clean nature of burning these fuels, no monitoring of emissions will be done. However, these units are subject to NSPS Dc regulations which require record keeping of fuel usage on a monthly basis.

Due to the burning of natural gas in the boilers, SO₂ generation is expected to be nominal. Therefore, no monitoring of SO₂ will be required.

The coating line is controlled by a thermal oxidizer. This oxidizer is for the control of VOCs and will have its operational temperature monitored and recorded for compliance with their facility wide VOC limit. Due to the inherent nature of the fuels and vapors in this incinerator, additional monitoring of opacity and particulates from the unit would not be required.

The monitoring for the coating process is the same as in the existing Title V Permit. This monitoring has been shown to be sufficient in the past and, therefore, no change to the monitoring is needed.

CAM

Rehau will meet the Compliance Assurance Monitoring (CAM) requirements through compliance with the proposed post November 15, 1990 NESHAP (MACT) (Plastic Parts) regulations within this Title V permit.

Following the MACT requirements should be sufficient to meet the CAM monitoring for VOCs. For the thermal oxidizer, the minimum set-point temperature of the combustion chamber was set by performance testing. The temperature will be monitored and recorded continuously using a thermocouple and chart. This facility shall maintain emission records and supporting background documents to this Department and submit records that pertain to their Major Source Operating Permit (MSOP) whenever requested.

Compliance Assurance Monitoring (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 control device(s).

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

No notification of the issuance of this major source operating permit to any affected state bordering Alabama is necessary since all states are notified automatically when the public notice is issued.

Recommendations

I recommend that the attached permit be issued to Rehau.

Kevin Fulmer
Chemical Branch
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